



UNITED STATES – MEASURES AFFECTING TRADE IN LARGE CIVIL AIRCRAFT (SECOND COMPLAINT)

RECOURSE TO ARTICLE 22.6 OF THE DSU BY THE UNITED STATES

DECISION BY THE ARBITRATOR

*BCI deleted, as indicated [[***]]*

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CASES CITED IN THIS DECISION

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<i>Canada – Aircraft Credits and Guarantees</i> (Article 22.6 – Canada)	Decision by the Arbitrator, <i>Canada – Export Credits and Loan Guarantees for Regional Aircraft – Recourse to Arbitration by Canada under Article 22.6 of the DSU and Article 4.11 of the SCM Agreement</i> , WT/DS222/ARB, 17 February 2003, DSR 2003:III, p. 1187
<i>EC – Bananas III (US)</i> (Article 22.6 – EC)	Decision by the Arbitrator, <i>European Communities – Regime for the Importation, Sale and Distribution of Bananas – Recourse to Arbitration by the European Communities under Article 22.6 of the DSU</i> , WT/DS27/ARB, 9 April 1999, DSR 1999:II, p. 725
<i>EC – Bananas III (Ecuador)</i> (Article 22.6 – EC)	Decision by the Arbitrator, <i>European Communities – Regime for the Importation, Sale and Distribution of Bananas – Recourse to Arbitration by the European Communities under Article 22.6 of the DSU</i> , WT/DS27/ARB/ECU, 24 March 2000, DSR 2000:V, p. 2237
<i>EC – Hormones</i>	Appellate Body Report, <i>European Communities – Measures Concerning Meat and Meat Products (Hormones)</i> , WT/DS26/AB/R, WT/DS48/AB/R, adopted 13 February 1998, DSR 1998:I, p. 135
<i>EC – Hormones (US)</i> (Article 22.6 – EC)	Decision by the Arbitrators, <i>European Communities – Measures Concerning Meat and Meat Products (Hormones), Original Complaint by the United States – Recourse to Arbitration by the European Communities under Article 22.6 of the DSU</i> , WT/DS26/ARB, 12 July 1999, DSR 1999:III, p. 1105
<i>EC and certain member States – Large Civil Aircraft</i>	Appellate Body Report, <i>European Communities and Certain Member States – Measures Affecting Trade in Large Civil Aircraft</i> , WT/DS316/AB/R, adopted 1 June 2011, DSR 2011:I, p. 7
<i>EC and certain member States – Large Civil Aircraft</i>	Panel Report, <i>European Communities and Certain Member States – Measures Affecting Trade in Large Civil Aircraft</i> , WT/DS316/R, adopted 1 June 2011, as modified by Appellate Body Report WT/DS316/AB/R, DSR 2011:II, p. 685
<i>EC and certain member States – Large Civil Aircraft (Article 21.5 – US)</i>	Appellate Body Report, <i>European Communities and Certain Member States – Measures Affecting Trade in Large Civil Aircraft – Recourse to Article 21.5 of the DSU by the United States</i> , WT/DS316/AB/RW and Add.1, adopted 28 May 2018
<i>EC and certain member States – Large Civil Aircraft (Article 21.5 – US)</i>	Panel Report, <i>European Communities and Certain Member States – Measures Affecting Trade in Large Civil Aircraft – Recourse to Article 21.5 of the DSU by the United States</i> , WT/DS316/RW and Add.1, adopted 28 May 2018, as modified by Appellate Body Report WT/DS316/AB/RW
<i>EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)</i>	Decision by the Arbitrator, <i>European Communities and Certain Member States – Measures Affecting Trade in Large Civil Aircraft – Recourse to Article 22.6 of the DSU by the European Union</i> , WT/DS316/ARB and Add.1, 2 October 2019
<i>EU – Energy Package</i>	Panel Report, <i>European Union and its member States – Certain Measures Relating to the Energy Sector</i> , WT/DS476/R and Add.1, circulated to WTO Members 10 August 2018
<i>Japan – DRAMS (Korea)</i>	Appellate Body Report, <i>Japan – Countervailing Duties on Dynamic Random Access Memories from Korea</i> , WT/DS336/AB/R and Corr.1, adopted 17 December 2007, DSR 2007:VII, p. 2703
<i>Russia – Pigs (EU)</i>	Panel Report, <i>Russian Federation – Measures on the Importation of Live Pigs, Pork and Other Pig Products from the European Union</i> , WT/DS475/R and Add.1, adopted 21 March 2017, as modified by Appellate Body Report WT/DS475/AB/R, DSR 2017:II, p. 361
<i>Thailand – Cigarettes (Philippines)</i>	Appellate Body Report, <i>Thailand – Customs and Fiscal Measures on Cigarettes from the Philippines</i> , WT/DS371/AB/R, adopted 15 July 2011, DSR 2011:IV, p. 2203
<i>US – 1916 Act (EC)</i> (Article 22.6 – US)	Decision by the Arbitrator, <i>United States – Anti-Dumping Act of 1916, Original Complaint by the European Communities – Recourse to Arbitration by the United States under Article 22.6 of the DSU</i> , WT/DS136/ARB, 24 February 2004, DSR 2004:IX, p. 4269
<i>US – Anti-Dumping Methodologies (China)</i> (Article 22.6 – US)	Decision by the Arbitrator, <i>United States – Certain Methodologies and Their Application to Anti-Dumping Proceedings Involving China – Recourse to Article 22.6 of the DSU by the United States</i> , WT/DS471/ARB and Add.1, 1 November 2019
<i>US – Carbon Steel (India)</i>	Appellate Body Report, <i>United States – Countervailing Measures on Certain Hot-Rolled Carbon Steel Flat Products from India</i> , WT/DS436/AB/R, adopted 19 December 2014, DSR 2014:V, p. 1727

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<i>US – Coated Paper (Indonesia)</i>	Panel Report, <i>United States – Anti-Dumping and Countervailing Measures on Certain Coated Paper from Indonesia</i> , WT/DS491/R and Add.1, adopted 22 January 2018
<i>US – Continued Suspension</i>	Appellate Body Report, <i>United States – Continued Suspension of Obligations in the EC – Hormones Dispute</i> , WT/DS320/AB/R, adopted 14 November 2008, DSR 2008:X, p. 3507
<i>US – COOL (Article 22.6 – US)</i>	Decisions by the Arbitrator, <i>United States – Certain Country of Origin Labelling (COOL) Requirements – Recourse to Article 22.6 of the DSU the United States</i> , WT/DS384/ARB and Add.1 / WT/DS386/ARB and Add.1, circulated to WTO Members 7 December 2015
<i>US – FSC (Article 21.5 – EC II)</i>	Appellate Body Report, <i>United States – Tax Treatment for "Foreign Sales Corporations" – Second Recourse to Article 21.5 of the DSU by the European Communities</i> , WT/DS108/AB/RW2, adopted 14 March 2006, DSR 2006:XI, p. 4721
<i>US – FSC (Article 22.6 – US)</i>	Decision by the Arbitrator, <i>United States – Tax Treatment for "Foreign Sales Corporations" – Recourse to Arbitration by the United States under Article 22.6 of the DSU and Article 4.11 of the SCM Agreement</i> , WT/DS108/ARB, 30 August 2002, DSR 2002:VI, p. 2517
<i>US – Gambling</i>	Appellate Body Report, <i>United States – Measures Affecting the Cross-Border Supply of Gambling and Betting Services</i> , WT/DS285/AB/R, adopted 20 April 2005, DSR 2005:XII, p. 5663 (and Corr.1, DSR 2006:XII, p. 5475)
<i>US – Gambling (Article 22.6 – US)</i>	Decision by the Arbitrator, <i>United States – Measures Affecting the Cross-Border Supply of Gambling and Betting Services – Recourse to Arbitration by the United States under Article 22.6 of the DSU</i> , WT/DS285/ARB, 21 December 2007, DSR 2007:X, p. 4163
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<i>US – Large Civil Aircraft (2nd complaint)</i>	Appellate Body Report, <i>United States – Measures Affecting Trade in Large Civil Aircraft (Second Complaint)</i> , WT/DS353/AB/R, adopted 23 March 2012, DSR 2012:I, p. 7
<i>US – Large Civil Aircraft (2nd complaint)</i>	Panel Report, <i>United States – Measures Affecting Trade in Large Civil Aircraft (Second Complaint)</i> , WT/DS353/R, adopted 23 March 2012, as modified by Appellate Body Report WT/DS353/AB/R, DSR 2012:II, p. 649
<i>US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)</i>	Appellate Body Report, <i>United States – Measures Affecting Trade in Large Civil Aircraft (Second Complaint) – Recourse to Article 21.5 of the DSU by the European Union</i> , WT/DS353/AB/RW and Add.1, adopted 11 April 2019
<i>US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)</i>	Panel Report, <i>United States – Measures Affecting Trade in Large Civil Aircraft (Second Complaint) – Recourse to Article 21.5 of the DSU by the European Union</i> , WT/DS353/RW and Add.1, adopted 11 April 2019, as modified by Appellate Body Report WT/DS353/AB/RW
<i>US – Line Pipe</i>	Appellate Body Report, <i>United States – Definitive Safeguard Measures on Imports of Circular Welded Carbon Quality Line Pipe from Korea</i> , WT/DS202/AB/R, adopted 8 March 2002, DSR 2002:IV, p. 1403
<i>US – Offset Act (Byrd Amendment) (EC) (Article 22.6 – US)</i>	Decision by the Arbitrator, <i>United States – Continued Dumping and Subsidy Offset Act of 2000, Original Complaint by the European Communities – Recourse to Arbitration by the United States under Article 22.6 of the DSU</i> , WT/DS217/ARB/EEC, 31 August 2004, DSR 2004:IX, p. 4591
<i>US – Offset Act (Byrd Amendment) (Chile) (Article 22.6 – US)</i>	Decision by the Arbitrator, <i>United States – Continued Dumping and Subsidy Offset Act of 2000, Original Complaint by Chile – Recourse to Arbitration by the United States under Article 22.6 of the DSU</i> , WT/DS217/ARB/CHL, 31 August 2004, DSR 2004:IX, p. 4511
<i>US – Section 110(5) Copyright Act (Article 25)</i>	Award of the Arbitrator, <i>United States – Section 110(5) of the US Copyright Act – Recourse to Arbitration under Article 25 of the DSU</i> , WT/DS160/ARB25/1, 9 November 2001, DSR 2001:II, p. 667
<i>US – Tax Incentives</i>	Appellate Body Report, <i>United States – Conditional Tax Incentives for Large Civil Aircraft</i> , WT/DS487/AB/R and Add.1, adopted 22 September 2017, DSR 2017:V, p. 2199
<i>US – Tuna II (Mexico) (Article 21.5 – Mexico)</i>	Appellate Body Report, <i>United States – Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products – Recourse to Article 21.5 of the DSU by Mexico</i> , WT/DS381/AB/RW and Add.1, adopted 3 December 2015, DSR 2015:X, p. 5133
<i>US – Tuna II (Mexico) (Article 22.6 – US)</i>	Decision by the Arbitrator, <i>United States – Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products – Recourse to Article 22.6 of the DSU by the United States</i> , WT/DS381/ARB, 25 April 2017

Short Title	Full Case Title and Citation
<i>US – Upland Cotton</i>	Appellate Body Report, <i>United States – Subsidies on Upland Cotton</i> , WT/DS267/AB/R, adopted 21 March 2005, DSR 2005:I, p. 3
<i>US – Upland Cotton</i>	Panel Report, <i>United States – Subsidies on Upland Cotton</i> , WT/DS267/R, Add.1 to Add.3 and Corr.1, adopted 21 March 2005, as modified by Appellate Body Report WT/DS267/AB/R, DSR 2005:II, p. 299
<i>US – Upland Cotton (Article 21.5 – Brazil)</i>	Appellate Body Report, <i>United States – Subsidies on Upland Cotton – Recourse to Article 21.5 of the DSU by Brazil</i> , WT/DS267/AB/RW, adopted 20 June 2008, DSR 2008:III, p. 809
<i>US – Upland Cotton (Article 21.5 – Brazil)</i>	Panel Report, <i>United States – Subsidies on Upland Cotton – Recourse to Article 21.5 of the DSU by Brazil</i> , WT/DS267/RW and Corr.1, adopted 20 June 2008, as modified by Appellate Body Report WT/DS267/AB/RW, DSR 2008:III, p. 997
<i>US – Upland Cotton (Article 22.6 – US I)</i>	Decision by the Arbitrator, <i>United States – Subsidies on Upland Cotton – Recourse to Arbitration by the United States under Article 22.6 of the DSU and Article 4.11 of the SCM Agreement</i> , WT/DS267/ARB/1, 31 August 2009, DSR 2009:IX, p. 3871
<i>US – Upland Cotton (Article 22.6 – US II)</i>	Decision by the Arbitrator, <i>United States – Subsidies on Upland Cotton – Recourse to Arbitration by the United States under Article 22.6 of the DSU and Article 7.10 of the SCM Agreement</i> , WT/DS267/ARB/2 and Corr.1, 31 August 2009, DSR 2009:IX, p. 4083
<i>US – Washing Machines (Article 22.6 – US)</i>	Decision by the Arbitrator, <i>United States – Anti-Dumping and Countervailing Measures on Large Residential Washers from Korea – Recourse to Article 22.6 of the DSU by the United States</i> , WT/DS464/ARB and Add.1, 8 February 2019
<i>US – Wool Shirts and Blouses</i>	Appellate Body Report, <i>United States – Measure Affecting Imports of Woven Wool Shirts and Blouses from India</i> , WT/DS33/AB/R, adopted 23 May 1997, and Corr.1, DSR 1997:I, p. 323

EXHIBITS REFERRED TO IN THIS DECISION

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EU-1	Ascend database
EU-2 (BCI)	Historical escalation rates and escalation rate forecasts
EU-3 (HSBI)	Air Canada final offer, [[HSBI]]
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EU-5 (HSBI)	Fly Dubai 2008 final offer, [[HSBI]]
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EU-8 (HSBI)	Icelandair final offer, [[HSBI]]
EU-12 (HSBI)	Airbus LCA Inflation Index
EU-13	Air Canada Press Release, "Air Canada Selects Boeing 737 MAX to Renew Mainline Narrowbody Fleet", 11 December 2013 (Exhibit EU-1571 CP)
EU-16	Icelandair Press Release, "Icelandair Group and Boeing Finalize Orders for 737 MAX", 13 February 2013
EU-19	Fly Dubai Press Release, "flydubai commits to USD 11.4 Billion 737 aircraft order", 17 November 2013 (Exhibit EU-1597 CP)
EU-20	Delta Press Release, "Delta Announces Order for 100 Boeing 737-900ER Aircraft", 25 August 2011 (Exhibit EU-1001 CP)
EU-21	Delta Airlines Supplemental Agreement, 25 August 2011
EU-22 (HSBI)	Delta Airlines previous offer, [[HSBI]]
EU-25 (HSBI)	Valuation of twin-aisle LCA lost sales
EU-44 (BCI)	Airbus 10-year yield rates; various years
EU-45 (BCI)	Expected survival rates for Airbus LCA
EU-46 (BCI)	Historic order cancellations in the single-aisle and twin-aisle LCA sales campaigns at issue
EU-46a	FlightGlobal, "Analysis: No crisis for 787 despite big Qantas cancellation", 23 August 2012
EU-51 (HSBI)	US – Large Civil Aircraft (Article 21.5 – EU), EU First Written Submission, 28 March 2013
EU-54 (HSBI)	US – Large Civil Aircraft (Article 21.5 – EU), EU Responses to Panel Questions, 8 October 2015
EU-58 (HSBI)	Updated valuation of single-aisle lost sales
EU-59	Ascend database update
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EU-62 (HSBI)	Valuation of lost sales in the single-aisle market based on delivery numbers contained in Airbus' final offers
EU-63 (HSBI)	Valuation of lost sales in the twin-aisle market based on delivery numbers contained in Airbus' final offers
EU-64 (BCI)	Airbus 10-year yield rates and WACC (2005-2018)
EU-65 (BCI)	<i>United States – Measures Affecting Trade in Large Civil Aircraft (Second Complaint) – Recourse to Article 21.5 of the DSU by the EU (WT/DS353-Art.21.5)</i> , Report from the Panel, Appendix 2
EU-66 (BCI)	Declaration by [[***]], 21 February 2020 ("Airbus production capacity")
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EU-68 (HSBI)	IndiGo, [[HSBI]]
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EU-75	2RPQ Ascend database update
EU-76 (HSBI)	2RPQ valuation of single-aisle threat of impedance – Boeing delivery schedules
EU-77 (HSBI)	2RPQ valuation of single-aisle threat of impedance – Airbus delivery schedules
EU-79	Daves, Philip R.; Michael C. Ehrhardt and Robert A. Kunkel, 2002, "Estimating systematic risk: the choice of return interval and estimation period", Journal of Financial and Strategic Decision, volume 13, number 1
EU-83 (HSBI)	Updated LCA indices, escalation rates and Airbus LCA Inflation Index
EU-84 (HSBI)	2RPQ valuation of single-aisle lost sales – Boeing delivery schedules
EU-85 (HSBI)	2RPQ valuation of single-aisle lost sales – Airbus delivery schedules
EU-87 (HSBI)	2RPQ valuation of twin-aisle lost sales – Airbus delivery schedules
USA-10	Airbus WACC and Discount Factors
USA-11	Producer Price Indexes – Program Overview, U.S. Department of Labor, Bureau of Labor Statistics
USA-12	PPI Industry Data File for Aircraft Manufacturing – Civilian Aircraft, Not Seasonally Adjusted (Jan. 2008 - March 2019), U.S. Department of Labor, Bureau of Labor Statistics
USA-13	Survival Rate Calculation
USA-15	Shannon Ackert, Commercial Aspects of Aircraft Customization, Aircraft Monitor (2013)
USA-25 (HSBI)	Corrected Annualized Value of the Adverse Effects in 2014 and March 2019 Dollars
USA-32 (BCI)	Boeing E-mail regarding Question 10

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USA-33 (BCI)	Boeing E-mail regarding Question 32
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USA-51 (BCI)	Declaration of [[***]] (Feb. 28, 2020) ("Boeing Declaration")
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USA-59 (HSBI)	Expected Value of the 2014 Fly Dubai Lost Sale in Order Year Dollars (Revised)
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USA-83 (HSBI)	2013 Icelandair Purchase Agreement
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USA-87 (HSBI)	Boeing [[***]] for 2008 Fly Dubai and 2011 Delta Sales Campaigns
USA-99	Brealey, Myers, and Allen, Principles of Corporate Finance, 9th Edition.
USA-104 (HSBI)	Expected Value of the [[***]] Lost Sale in Order Year Dollars (Revised)
USA-105 (HSBI)	Annualized Value of the Adverse Effects in 2015 Dollars (Revised)

ABBREVIATIONS USED IN THIS DECISION

Abbreviation	Description
737MAX	Boeing 737MAX
737NG	Boeing 737 new generation
747-8I	Boeing 747-8 International
A320neo	Airbus A320 new engine option
A320ceo	Airbus A320 current engine option
A350XWB	Airbus A350 "eXtra widebody"
ALII	Airbus LCA Inflation Index
B&O	Business and Occupation
BCI	Business Confidential Information
[[***]]	[[***]]
CA	Civil Aircraft
CPI	Consumer Price Index
DOD	United States Department of Defense
DSB	Dispute Settlement Body
DSU	Understanding on Rules and Procedures Governing the Settlement of Disputes
EC	European Communities
ETI Act	FSC Repeal and Extraterritorial Income Exclusion Act of 2000
EU	European Union
FSC	Foreign Sales Corporation
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
HSBI	Highly Sensitive Business Information
IRB	Industrial Revenue Bond
JAL	Japan Airlines
LCA	large civil aircraft
NASA	U.S. National Aeronautics and Space Administration
NPV	net present value
PPI for CA Manufacturing	United States Producer Price Index for Aircraft Manufacturing of Civilian Aircraft
R&D	research and development
R&TD	research and technological development
RDT&E	Research, Development, Test and Evaluation
RfP	Request for Proposal
SCM Agreement	Agreement on Subsidies and Countervailing Measures
UAE	United Arab Emirates
UK	United Kingdom
US	United States of America
USD	United States Dollar
USDOD	United States Department of Defense
Vienna Convention	Vienna Convention on the Law of Treaties, Done at Vienna, 23 May 1969, 1155 UNTS 331; 8 International Legal Materials 679
VLA	very large aircraft
WACC	Weighted Average Cost of Capital
WTO	World Trade Organization

1 INTRODUCTION

1.1 Original proceedings and compliance proceedings

1.1. The present arbitration proceeding arises in the dispute initiated by the European Union¹ concerning certain measures by the United States affecting trade in large civil aircraft (LCA).²

1.2. The original proceedings in this dispute commenced on 27 June 2005, when the European Union requested consultations with the United States pursuant to Articles 4.1, 7.1, and 30 of the Agreement on Subsidies and Countervailing Measures (SCM Agreement), Article XXIII:1 of the General Agreement on Tariffs and Trade (GATT) 1994 and Article 4 of the Understanding on Rules and Procedures Governing the Settlement of Disputes (DSU), with regard to measures affecting trade in LCA.³ On 20 January 2006, the European Union requested the establishment of a panel pursuant to Article 6 of the DSU, Article XXIII:2 of the GATT 1994 and Articles 4, 7 and 30 of the SCM Agreement (to the extent that Article 30 incorporates by reference Article XXIII of the GATT 1994).⁴

1.3. The panel report and the Appellate Body report in the original proceedings were circulated to Members on 31 March 2011 and 12 March 2012, respectively. The Dispute Settlement Body (DSB) adopted the Appellate Body report and the panel report, as modified by the Appellate Body report, on 23 March 2012.⁵ The panel and the Appellate Body in the original proceedings found that certain measures of the United States, including measures adopted at a sub-federal level, constituted specific subsidies to the US LCA industry⁶ and were inconsistent with the SCM Agreement.

1.4. First, the panel found that certain tax exemptions and tax exclusions provided to Boeing under the Foreign Sales Corporation (FSC) legislation and the FSC Repeal and Extraterritorial Income Exclusion Act of 2000 (ETI Act), including the transition and grandfather provisions of the ETI Act

¹ In the original panel proceedings, the complaining party was the European Communities. The European Union replaced and succeeded the European Communities as of 1 December 2009 following the entry into force of the Treaty of Lisbon amending the Treaty on European Union and the Treaty establishing the European Community on 1 December 2009. For ease of reference, we refer to the "European Union" whether discussing events that occurred before or after the entry into force of the Treaty of Lisbon.

² In the original proceedings, the panel referred to a footnote in the European Union's request for establishment of a panel which stated that, in accordance with the 1992 *Agreement between the European Communities and the Government of the United States of America concerning the Application of the GATT Agreement on Trade in Civil Aircraft*, "LCA" included all aircraft as defined in Article 1 of the GATT Agreement on Trade in Civil Aircraft, except engines as defined in Article 1.1(b) thereof, that are designed for passenger or cargo transportation and have 100 or more passenger seats or its equivalent in cargo configuration. (Panel Report, *US – Large Civil Aircraft* (2nd complaint), paras. 2.1 and 7.1. See also Appellate Body Report, *US – Large Civil Aircraft* (2nd complaint), para. 1)

³ WT/DS353/1 (originally circulated as WT/DS317/1/Add. 1 as corrected by WT/DS353/1). The original proceedings must be seen against the background of an earlier proceeding, which was initiated in October 2004 when the European Union requested consultations with the United States in respect of alleged prohibited and actionable subsidies provided to US producers of LCA. On 20 July 2005, the DSB established a panel in that proceeding (*US – Measures Affecting Trade in Large Civil Aircraft* (DS317)), which was composed on 17 October 2005. In September 2005, the DSB initiated an Annex V procedure in the DS317 dispute and designated Mr Mateo Diego-Fernández as the DSB representative for that procedure. (DSB, Minutes of the meeting held on 23 September 2005, WT/DSB/M/197, paras. 6-10) In its June 2005 request for consultations in the DS353 dispute, the European Union referred to the United States' statement at the meeting of the DSB on 13 June 2005 asserting that 13 of the 28 subsidy programmes listed by the European Union in its DS317 panel request were not listed in the DS317 consultation request of 6 October 2004. The European Union indicated that it was unable to agree with the United States' contention but that it was prepared to pursue consultations on the issues raised in these subsequent proceedings in order to clarify and, if possible, resolve them.

⁴ Request for the establishment of a panel by the European Union, WT/DS353/2 (originally circulated as WT/DS317/5, as corrected by WT/DS353/2 and WT/DS353/2/Corr.1).

⁵ DSB, Minutes of the meeting held on 23 March 2012, WT/DSB/M/313 (circulated 29 March 2012), para. 79.

⁶ In the original proceedings, the European Union used the term "US large civil aircraft industry" to refer to The Boeing Company and the McDonnell Douglas Corporation prior to its 1997 merger with Boeing. (Panel Report, *US – Large Civil Aircraft* (2nd complaint), paras. 2.1, 7.1, and fn 1042)

and the American Jobs Creation Act of 2004, were prohibited export subsidies under Articles 3.1(a) and 3.2 of the SCM Agreement.⁷ This finding was not appealed.

1.5. Second, the panel and the Appellate Body found that the following measures were inconsistent with Articles 5(c) and 6 of the SCM Agreement:

- a. payments provided to Boeing by the National Aeronautics and Space Administration (NASA) pursuant to procurement contracts entered into under eight aeronautics research and development (R&D) programmes and access to facilities, equipment and employees provided to Boeing pursuant to procurement contracts and Space Act Agreements entered into under these programmes;
- b. payments and access to facilities provided to Boeing by the United States Department of Defense (DOD) pursuant to assistance instruments entered into under 23 Research, Development, Test and Evaluation (RDT&E) programmes;
- c. tax exemptions and tax exclusions provided to Boeing pursuant to the FSC/ETI measures;
- d. Washington State Business and Occupation (B&O) tax rate reduction for commercial aircraft and component manufacturers; and
- e. property and sales tax abatements related to Industrial Revenue Bonds (IRBs) issued by the City of Wichita, Kansas.

1.6. These five groups of measures were found to involve specific subsidies within the meaning of Articles 1 and 2 of the SCM Agreement and to cause serious prejudice to the interests of the European Union within the meaning of Articles 5(c) and 6.3 of the SCM Agreement as follows:

- a. the NASA and DOD aeronautics R&D measures caused serious prejudice within the meaning of Articles 5(c) and 6.3(b) and (c) with respect to the 200-300 seat LCA product market in the form of a threat of displacement and impedance of European Union exports in certain third-country markets and significant lost sales;
- b. the tax exemptions and tax exclusions provided to Boeing pursuant to the FSC/ETI measures, together with the Washington State B&O tax rate reduction, caused serious prejudice within the meaning of Articles 5(c) and 6.3(c) with respect to the 100-200 seat LCA product market in the form of significant lost sales; and
- c. property and sales tax abatements related to IRBs issued by the City of Wichita, Kansas complemented and supplemented the price effects of the FSC/ETI subsidies and the Washington State B&O tax rate reductions, thereby causing serious prejudice to the interests of the European Union within the meaning of Articles 5(c) and 6.3(c) in the 100-200 seat LCA product market in the form of significant lost sales.

1.7. In relation to the finding that the FSC/ETI measures were prohibited subsidies within the meaning of Articles 3.1(a) and 3.2 of the SCM Agreement, the original panel refrained from making a new recommendation under Article 4.7. The panel noted "the conclusion of the {p}anel in *US – FSC (Article 21.5 – EC II)*, which was upheld by the Appellate Body, that the recommendation made by the panel in the dispute in *US – FSC* continued to be 'operative'".⁸

1.8. In respect of the findings of serious prejudice caused by certain subsidies, the Appellate Body recommended that:

{T}he DSB request the United States to bring its measures, found in this report, and in the panel report as modified by this Report, to be inconsistent with the *SCM Agreement*, into conformity with its obligations under that Agreement. More specifically, having regard to the recommendations made by the Panel in paragraph 8.9 of its Report and the provisions of Article 7.8 of the SCM Agreement, the Appellate Body recommends

⁷ Panel Report, *US – Large Civil Aircraft (2nd complaint)*, paras. 7.1434-7.1464 and 8.2.

⁸ Panel Report, *US – Large Civil Aircraft (2nd complaint)*, para. 8.7.

that the United States take appropriate steps to remove the adverse effects found to have been caused by its use of subsidies, or to withdraw those subsidies.⁹

1.9. According to Articles 7.8 and 7.9 of the SCM Agreement, the United States had six months from the date of adoption of the panel report or the Appellate Body report to take appropriate steps to remove the adverse effects of the subsidies or withdraw the subsidies (implementation period). This implementation period expired on 23 September 2012. On 23 September 2012, the United States provided a notification to the DSB identifying "a number of actions to withdraw the subsidies found to have caused adverse effects or to remove their adverse effects", in light of which the United States considered that it "has fully complied with the recommendations and rulings of the {DSB} in this dispute".¹⁰

1.10. On 24 April 2012, the parties informed the DSB of their Agreed Procedures under Articles 21 and 22 of the DSU and Article 7 of the SCM Agreement (the Sequencing Agreement).¹¹ On 25 September 2012, the European Union requested consultations with the United States, explaining that it was of the view that "{t}he actions and events listed by the United States in its 23 September 2012 notification do not withdraw the subsidies or remove their adverse effects, as required by Articles 4.7 and 7.8 of the SCM Agreement" and that "the United States has failed to achieve compliance with the recommendations and rulings of the DSB".¹² The European Union and the United States held consultations on 10 October 2012, but the consultations failed to resolve the dispute. On 11 October 2012, the European Union requested the establishment of a panel "in accordance with Articles 4.4 and 7.4 of the SCM Agreement and Article 21.5 of the DSU", with standard terms of reference.¹³ At its meeting on 23 October 2012, the DSB referred this dispute to the original panel if possible, in accordance with Article 21.5 of the DSU.¹⁴ In accordance with Article 21.5 of the DSU, the panel was composed on 30 October 2012.¹⁵

1.11. The compliance panel issued its Interim Report to the parties on 16 September 2016.¹⁶ On 5 December 2016, the Appellate Body received a letter from the European Union referring to an anticipated appeal in this dispute, to the ongoing appeal in *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)* (DS316 compliance proceedings) and to an imminent appeal in *US – Tax Incentives* (DS487). In its letter, the European Union requested that the hearings in all three appeals be sufficiently proximate in time so that a particular matter would not be effectively disposed of in one appeal before the related matter is heard in the other appeals.¹⁷ Following receipt of comments on the European Union's request by the United States and third participants, the Appellate Body indicated by letter dated 22 December 2016 that it would bear in mind the

⁹ Appellate Body Report, *US – Large Civil Aircraft (2nd complaint)*, para. 1352. (emphasis original)

¹⁰ Communication by the United States, WT/DS353/15 (Compliance Communication), para. 2.

¹¹ Communication by the Parties, WT/DS353/14 (Understanding between the European Union and the United States Regarding Procedures under Articles 21 and 22 of the DSU). Under the Sequencing Agreement, the parties agreed, *inter alia*, that if the matter should be referred to arbitration prior to the adoption by the DSB of its rulings following Article 21.5 proceedings, they would, at the earliest possible moment, request the arbitrator under Article 22.6 to suspend its work.

¹² Request for consultations by the European Union, recourse to Article 21.5 of the DSU, WT/DS353/16 (European Union's consultations request), p. 2.

¹³ Request for the establishment of a panel by the European Union, recourse to Article 21.5 of the DSU, WT/DS353/18 (European Union's panel request), para. 34.

¹⁴ DSB, Minutes of Meeting held on 23 October 2012, WT/DSB/M/323, para. 81. At this meeting, the United States stated its view that the panel was being established only under Article 21.5 of the DSU (WT/DSB/M/323, paras. 78 and 79).

¹⁵ *US – Large Civil Aircraft (2nd complaint)*, Recourse to Article 21.5 of the DSU by the European Union, Constitution of the Panel, Note by the Secretariat, WT/DS353/21 (circulated 5 November 2012), para. 3.

¹⁶ Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 5.1.

¹⁷ Appellate Body Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 1.21. The compliance panel in the DS316 dispute had circulated its report on 22 September 2016, and the European Union had filed a notice of appeal in that dispute on 13 October 2016. (Appellate Body Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, paras. 1.11 and 1.14) The Appellate Body report in the DS316 compliance proceedings was circulated on 15 May 2018. (See Appellate Body Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*) The DS316 proceedings are discussed further in section 5 below.

European Union's request, as well as the comments received, during the appellate proceedings in the three disputes.¹⁸

1.12. On 9 June 2017, the compliance panel issued its report, finding, *inter alia*, that:

- a. the United States had failed to withdraw the subsidy within the meaning of Article 7.8 of the SCM Agreement with regard to the pre-2007 NASA and DOD aeronautics R&D subsidies that were the subject of the DSB recommendations and rulings, and certain post-2006 measures of the United States that were challenged in the compliance proceedings and which were found by the compliance panel to involve specific subsidies within the meaning of Articles 1 and 2 of the SCM Agreement¹⁹; and
- b. the United States had failed to take appropriate steps to remove the adverse effects within the meaning of Article 7.8 of the SCM Agreement as regards the Washington State B&O tax rate reduction, the effects of which were demonstrated by the European Union to be: (i) a genuine and substantial cause of significant lost sales within the meaning of Articles 5(c) and 6.3 of the SCM Agreement of A320neo and A320ceo families of LCA in the single-aisle LCA market, in respect of the sales campaigns for Fly Dubai in 2014, Air Canada in 2013 and Icelandair in 2013, in the post-implementation period; and (ii) a genuine and substantial cause of threat of impedance of imports of the A320ceo to the United States single-aisle market, and a threat of impedance of exports of Airbus single-aisle LCA in the United Arab Emirates (UAE) third-country market, within the meaning of Articles 5(c) and 6.3(a) and (b) of the SCM Agreement in the post-implementation period.²⁰

1.13. The compliance panel also made a number of other findings, including the following:

- a. with respect to the European Union's claim that the United States had failed to comply with its obligation to take appropriate steps to remove the adverse effects within the meaning of Article 7.8 of the SCM Agreement, the European Union had failed to establish: (i) that the effects of certain aeronautics R&D subsidies and other subsidies were a genuine and substantial cause of significant lost sales, significant price suppression, impedance of imports to the United States market or impedance of exports to various third-country markets, or threats of any of the foregoing, within the meaning of Articles 5(c) and 6.3(a), (b) and (c) of the SCM Agreement, in respect of the A350XWB in the post-implementation period; or (ii) that the original adverse effects of the pre-2007 aeronautics R&D subsidies in respect of the A330 and Original A350 continue in the post-implementation period as significant price suppression of the A330 and A350XWB, significant lost sales of the A350XWB, or a threat of impedance of exports of the A350XWB in the twin-aisle LCA market, within the meaning of Articles 5(c) and 6.3(a), (b) and (c) of the SCM Agreement in the post-implementation period; and (iii) that the effects of the pre-2007 aeronautics R&D subsidies and the post-2006 subsidies are a genuine and substantial cause of significant price suppression of the A320neo or A320ceo, impedance of imports of the A320neo or A320ceo to the United States' market, or displacement and impedance of exports of the A320neo or A320ceo to the third-country markets of Australia, Brazil, Canada, Iceland, Indonesia, Malaysia, Mexico, Norway, Russia, and Singapore, within the meaning of Articles 5(c) and 6.3(a), (b) and (c) of the SCM Agreement, or threats of any of the foregoing, in the post-implementation period²¹; and

¹⁸ See Appellate Body Reports, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 1.21; *US – Tax Incentives*, para. 1.5; and *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, para. 1.23.

¹⁹ Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 11.7. The post-2006 measures that were found to constitute specific subsidies within the meaning of Articles 1 and 2 of the SCM Agreement are listed in paragraph 11.7(b) of the panel report. With respect to the tax exemptions and exclusions under FSC/ETI legislation and successor legislation, the compliance panel found that the European Union had failed to establish that Boeing actually received the FSC/ETI tax benefits after 2006, and that the measure therefore involved a financial contribution within the meaning of Article 1.1(a)(1)(ii) of the SCM Agreement. (Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 11.7(c)(ii))

²⁰ Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 11.8.

²¹ Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, paras. 9.177, 9.186, 9.197, 9.216-9.217, 9.218-9.220, 9.355, 9.372-9.373, and 11.8(a), (b), and (e).

- b. with respect to the European Union's claims under Articles 3.1 and 3.2 of the SCM Agreement and Article III:4 of the GATT 1994 that, to the extent that the compliance panel had found that the claims were within the scope of the compliance proceeding, and that the measures at issue were subsidies within the meaning of Article 1 of the SCM Agreement, the European Union had failed to establish that the subsidies were inconsistent with Articles 3.1(a) and 3.2 or Articles 3.1(b) and 3.2 of the SCM Agreement, or with Article III:4 of the GATT 1994.²²

1.14. In light of the foregoing, the compliance panel concluded that, by continuing to be in violation of Articles 5(c) and 6.3(a), (b) and (c) of the SCM Agreement, the United States had "failed to comply with the DSB recommendations and rulings and, in particular, the obligation under Article 7.8 of the SCM Agreement to 'take appropriate steps to remove the adverse effects or ... withdraw the subsidy'".²³

1.15. On 27 June 2017, the European Union notified the DSB of its intention to appeal the compliance panel report and filed a notice of appeal.²⁴

1.16. On 28 March 2019, the Appellate Body issued its report in the compliance proceedings in this dispute. The Appellate Body upheld the panel's findings concerning the existence of adverse effects in the post-implementation period, namely, that the European Union had established that the Washington State B&O tax rate reduction caused significant lost sales, within the meaning of Articles 5(c) and 6.3(c) of the SCM Agreement, in the single-aisle LCA market, with respect to the Fly Dubai 2014, Icelandair 2013 and Air Canada 2013 sales campaigns, as well as a threat of impedance of imports of Airbus single-aisle LCA to the United States and exports of Airbus single-aisle LCA to the UAE, within the meaning of Articles 5(c) and 6.3(a) and (b) of the SCM Agreement, in the post-implementation period.²⁵

1.17. The Appellate Body also reversed various other findings of the compliance panel. Among them were the findings that the European Union had failed to demonstrate that the pre-2007 aeronautics R&D subsidies continued to cause adverse effects in the post-implementation period and that the United States continued to grant or maintain the FSC/ETI subsidy in the post-implementation period. More specifically, the Appellate Body:

- a. reversed the compliance panel's finding that the European Union had failed to demonstrate: (i) that the acceleration effects of the pre-2007 aeronautics R&D subsidies in relation to Boeing's technology development for the 787²⁶ have continued into the post-implementation period; (ii) the existence of original subsidy technology effects of the pre-2007 aeronautics R&D subsidies in relation to Boeing's technology development for the 787 in the post-implementation period; and (iii) the existence of spill-over technology effects of the pre-2007 aeronautics R&D subsidies on the 787-9/10, the 777X, and the 737MAX in the post-implementation period, as a consequence of which (and to that extent) the Appellate Body also reversed the compliance panel's findings that the European Union had failed to establish that the pre-2007 aeronautics R&D subsidies are a genuine and substantial cause of any of the forms of serious prejudice alleged with respect to the A350XWB and A320neo in the post-implementation period, through a technology causal mechanism. The Appellate Body further found that it was unable to complete the analysis

²² Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 11.9.

²³ Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 11.10.

²⁴ WT/DS353/27; Appellate Body Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 1.22.

²⁵ Appellate Body Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, paras. 5.569 and 6.13(b). The Appellate Body report presents the compliance panel's findings as being in relation to the "tied tax" subsidies. However, the compliance panel's findings in paragraphs 9.407, 9.444, and 11.8.c-d of the compliance panel report refer specifically to the Washington State B&O tax rate reduction. In its report, the compliance panel identifies the measures included within the category of "tied tax" subsidies in the twin-aisle market at paragraph 9.234 ("the tied tax subsidies ... are the Washington State and City of Everett B&O tax rate reductions") and in the single-aisle market at paragraph 9.378 ("the subsidy within the tied tax subsidies aggregated category ... is the Washington State B&O tax rate reduction").

²⁶ These acceleration effects are described in paragraph 5.373 of the Appellate Body report in the compliance proceedings.

with regard to whether there remained acceleration effects of the pre-2007 aeronautics R&D subsidies in the post-implementation period²⁷; and

- b. reversed the compliance panel's finding that the European Union had failed to establish that, after the expiry of the implementation period, the United States grants or maintains subsidies to Boeing in the form of FSC/ETI tax concessions. The Appellate Body completed the analysis and found that, to the extent that Boeing remained entitled to FSC/ETI tax concessions in the post-implementation period, the United States had not ceased to provide a financial contribution and thus had not withdrawn FSC/ETI subsidies with respect to Boeing within the meaning of Article 7.8 of the SCM Agreement.²⁸

1.18. The Appellate Body report and the compliance panel report, as modified by the Appellate Body, were adopted by the DSB on 11 April 2019.²⁹

1.2 Referral to arbitration and arbitration proceeding

1.19. On 27 September 2012, the European Union requested authorization from the DSB to "take countermeasures that are appropriate {within the meaning of Article 4.10 of the SCM Agreement}, and commensurate with the degree and nature of the adverse effects determined to exist {within the meaning of Article 7.9 of the SCM Agreement}". In its request, the European Union considered that "countermeasures consistent with these standards total{led} approximately {United States Dollar (USD)} 12 billion annually".³⁰

1.20. The European Union's request states that the European Union intends, in the first instance, to take countermeasures in the goods sector but that, consistent with Article 22.3(c) of the DSU, the European Union considers that it is not practicable or effective to take countermeasures in the goods sector up to the full amount of USD 12 billion, and that the circumstances are serious enough, given, *inter alia*, the degree and nature of the adverse effects and serious prejudice. Accordingly, the European Union advised that its countermeasures would consist of one or more of the following:

- a. suspension of tariff concessions and other related obligations under the GATT 1994 on a list of US products to be established in due course;
- b. suspension of concessions and other obligations under the SCM Agreement; and
- c. under the General Agreement on Trade in Services (GATS), suspension of horizontal or sectoral commitments contained in the consolidated EU Schedule of Specific Commitments, as supplemented to incorporate the individual Schedules of Specific Commitments of its Member States, with regard to all principal sectors identified in the Services Sectoral Classification List.³¹

1.21. On 22 October 2012, the United States objected to the level of suspension of concessions or other obligations proposed by the European Union and claimed that the European Union had not followed the principles and procedures set forth in Article 22.3 of the DSU. Further, the United States stated that there was no legal basis for the European Union to request authorization for

²⁷ Appellate Body Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), paras. 5.416, 5.420-5.421, 5.443, and 6.11. The Appellate Body expressly upheld the compliance panel's finding (in paragraphs 9.332 and 11.8(b) of the compliance panel report) that the European Union had failed to establish that the effects of the pre-2007 aeronautics R&D subsidies continued into the post-implementation period as present serious prejudice in relation to the A330 and A350XWB, within the meaning of Articles 5(c) and 6.3 of the SCM Agreement. (Appellate Body Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), paras. 5.362-5.363 and 6.10(b))

²⁸ Appellate Body Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), paras. 5.171-5.172 and 6.4.

²⁹ Appellate Body Report and Panel Report pursuant to Article 21.5 of the DSU, *Action by the Dispute Settlement Body*, WT/DS353/32.

³⁰ Recourse to Article 22.2 of the DSU, and Articles 4.10 and 7.9 of the SCM Agreement by the European Union, WT/DS353/17. The European Union's request indicates that the European Union may update this amount annually using the most recently available data.

³¹ Recourse to Article 22.2 of the DSU, and Articles 4.10 and 7.9 of the SCM Agreement by the European Union, WT/DS353/17.

countermeasures pursuant to Article 4.10 of the SCM Agreement considering that there were no DSB recommendations under Article 4 of the SCM Agreement.³²

1.22. At the DSB meeting on 23 October 2012, the DSB agreed that the matter raised by the United States in document WT/DS353/19 had been referred to arbitration, as required by Article 22.6 of the DSU.³³ The Arbitrator was constituted on 5 November 2012³⁴ and was composed of the original panelists:

Chairperson: Mr Crawford Falconer

Members: Mr Francisco Orrego Vicuña
Mr Virachai Plasai

1.23. In accordance with the terms of the parties' Sequencing Agreement, and upon a joint request from the parties, the Arbitrator suspended the arbitration proceeding from 28 November 2012 until either party requested the resumption of its work.³⁵

1.24. On 5 June 2019 (55 days following the DSB's adoption of the Appellate Body and panel reports in the compliance proceedings on 11 April 2019), the European Union requested the resumption of the Arbitrator's work. The Arbitrator resumed its work on that day.³⁶ Due to the unavailability of the original appointees to serve as members of the Arbitrator, the Director-General appointed a new Chairperson and new members of the Arbitrator on 3 June 2019, pursuant to a request from the European Union made on 20 May 2019.³⁷ The new composition of the Arbitrator was as follows:

Chairperson: Ms Andrea Marie Dawes (*née* Brown)

Members: Ms Tracey Epps
Mr Eduardo Muñoz

1.25. An organizational meeting was held on 27 June 2019 to discuss procedural aspects of the arbitration proceeding. Both prior and subsequent to the organizational meeting, in letters dated 25 June 2019 and 1 July 2019, respectively, the European Union raised concerns regarding the draft timetable that the Arbitrator had sent to the parties in advance of the meeting. The European Union argued that the timetable proposed by the Arbitrator was unacceptable in light of the timetable that had been adopted by the arbitrator in *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)* (DS316 arbitration proceeding). The European Union urged the Arbitrator, in the interests of "even-handedness", to reconsider the proposed timetable and hold the substantive meeting with the parties in December 2019 rather than 11-13 February 2020 as had been proposed by the Arbitrator in its draft timetable.³⁸

1.26. The United States responded at the organizational meeting and subsequently in writing on 1 July 2019 that it had no objections to the timetable proposed by the Arbitrator. It argued that the European Union's proposal for rigid correspondence between the timetables adopted by this Arbitrator and the arbitrator in the DS316 arbitration proceeding was misplaced and would raise concerns of improper linking of disputes, which would be contrary to Article 3.10 of the DSU. The United States argued that, in any event, the draft timetable proposed by the Arbitrator was substantially similar to the timetable adopted in the DS316 arbitration proceeding. The United States urged the Arbitrator to base its timetable on the substantive complexity of the matter, the time the parties needed to address the issues fully, and the time the Arbitrator needed to render a decision consistent with its mandate.³⁹

³² Recourse to Article 22.6 of the DSU by the United States, WT/DS353/19.

³³ DSB, Minutes of the meeting held on 23 October 2012, WT/DSB/M/323, para. 74.

³⁴ Constitution note of the Arbitrator, WT/DS353/20.

³⁵ Communication from the Arbitrator, WT/DS353/22 (Suspension of the Work of the Arbitrator). See fn 11 above.

³⁶ Communication from the Arbitrator, WT/DS353/33 (Resumption of the Work of the Arbitrator).

³⁷ Constitution note of the Arbitrator, WT/DS353/3/Add.1.

³⁸ European Union's communications (25 June 2019 and 1 July 2019).

³⁹ United States' communication (1 July 2019).

1.27. On 8 July 2019, the Arbitrator sent a revised draft timetable to the parties along with a communication addressing the various points raised by the European Union regarding the timetable and advising that the Arbitrator had decided that it would be possible to bring the dates of the substantive meeting forward by two weeks without unduly compromising its ability to adequately prepare for the meeting.⁴⁰ After ensuring that the parties had no conflicts that would prevent them from participating in the substantive meeting on the dates 28-30 January 2020, the Arbitrator adopted its timetable on 9 July 2019.⁴¹

1.28. On 8 July 2019, the Arbitrator adopted its Working Procedures and Additional Working Procedures Concerning Protection of Business Confidential Information (BCI) and Highly Sensitive Business Information (HSBI) (BCI/HSBI Procedures).⁴² On 6 December 2019, the Arbitrator adopted Additional Working Procedures for the Substantive Meeting with the Arbitrator concerning the recording and delayed public presentation of the opening oral statements of the parties at the substantive meeting (see section 2.2 below).⁴³

1.29. In accordance with the timetable and Working Procedures adopted by the Arbitrator, the European Union submitted on 25 July 2019 a communication explaining its methodology for calculating the proposed level of suspension, "correspond{ing} to approximately {USD} 10.02 billion" annually.⁴⁴ The United States filed its written submission on 12 September 2019. The European Union filed its written submission on 17 October 2019. The Arbitrator sent a first set of questions to the parties for written responses on 7 November 2019, to which the parties responded on 21 November 2019.

1.30. The Arbitrator held its substantive meeting with the parties from 28-30 January 2020. On 6 February 2020, following the substantive meeting with the parties, the Arbitrator sent a second set of written questions to the parties for written responses by 20 February 2020 and comments, if any, on the other party's responses by 5 March 2020.

1.31. In a letter dated 10 February 2020, the United States requested the Arbitrator to extend the deadline for responses to 2 March 2020 and the deadline for comments on responses to 16 March 2020. In support of its request, the United States advised that it would need to consult with Boeing to obtain the documents and the information requested by the Arbitrator, and identified various steps in this process that would require time and resources on the part of the United States and of Boeing. Finally, the United States noted that the arbitrator in the DS316 arbitration proceeding had, in similar circumstances, extended by ten days the deadline to submit responses to the questions sent by that arbitrator after the substantive meeting.⁴⁵

1.32. The European Union responded that the Arbitrator should reject the United States' request, arguing that the United States' comparison of the current circumstances with those in which the arbitrator in the DS316 arbitration proceeding extended the deadline for responses as a basis to justify its request was flawed and unavailing because the number of questions posed and documents sought by that arbitrator were far greater than what was being requested by the Arbitrator in this proceeding. It also noted that many of the questions that formed part of the second set of written questions had already been posed orally to the parties at the substantive meeting with the parties, which further reduced the number of questions to which the United States had to prepare fresh responses. Finally, the European Union argued that, as a prudent litigant, the United States would

⁴⁰ Arbitrator's communication to the parties regarding the timetable and Working Procedures, (8 July 2019), Annex C-1.

⁴¹ On 10 September 2019, the Chairperson of the Arbitrator received a letter from the CEO of Air Baltic Corporation, co-addressed, *inter alia*, to the Chairperson of the DS316 arbitrator and the Director-General of the WTO and urging "the WTO to encourage and facilitate the parties towards settlement discussions by coordinating the decisions of the {arbitrators} in both proceedings". On 13 September 2019, the Arbitrator forwarded the letter of 10 September 2019 to the parties. On 18 September 2019, the Arbitrator replied by letter to the CEO of Air Baltic Corporation, acknowledging receipt of the letter of 10 September 2019 and advising that the Arbitrator had forwarded the letter to the parties.

⁴² See Working Procedures of the Arbitrator, Annex A-1; and Additional Working Procedures for the Protection of Business Confidential Information and Highly Sensitive Business Information, Annex A-2.

⁴³ See Additional Working Procedures for the Substantive Meeting with the Arbitrator, Annex A-3.

⁴⁴ European Union's methodology paper, para. 216 (emphasis omitted). But see para. 6.6.c below and fns 123 and 597 for subsequent revisions by the European Union of the proposed level of suspension.

⁴⁵ United States' communication (10 February 2020).

have consulted the documents requested by the Arbitrator in developing its positions so far in this proceeding.⁴⁶

1.33. In a communication to the parties dated 14 February 2020, the Arbitrator advised that it had decided to revise the deadlines for responses to the Arbitrator's second set of written questions to 2 March 2020 and for comments on responses to 16 March 2020. In its communication, the Arbitrator acknowledged the European Union's concerns and noted that it did not expect this extension to materially delay the Arbitrator's overall work.⁴⁷ The timetable was accordingly revised on 14 February 2020.

1.34. The Arbitrator on 28 September 2020 issued to the parties a version of its Decision containing BCI and a redacted version intended for public circulation. The Arbitrator provided its HSBI calculations underlying the number in paragraph 6.311 of this Decision on the same date. The parties returned with requests for changes to redactions on 2 October 2020. In response to media reports that appeared beginning on 30 September 2020, which contained the Arbitrator's calculated level of countermeasures, the Arbitrator issued a communication to the parties contained in Annex C-11. The Decision of the Arbitrator was circulated to WTO Members on 13 October 2020.

2 PROCEDURAL MATTERS

2.1. In this section, the Arbitrator addresses five procedural matters: (a) the treatment of BCI and HSBI; (b) the decision to record portions of the substantive meeting for a later presentation to the public; (c) an objection raised by the United States regarding the use of certain HSBI by the European Union in its responses to the Arbitrator's questions to the parties; (d) communications between the Arbitrator and the parties pertaining to the effects of the Covid-19 pandemic on the work of the Arbitrator; and (e) the United States' request for leave to file an additional submission regarding the purported elimination of the Washington State B&O tax rate reduction as of 1 April 2020.

2.1 Treatment of BCI and HSBI

2.2. As previously noted, the Arbitrator adopted BCI/HSBI Procedures on 8 July 2019.⁴⁸ The BCI/HSBI Procedures, *inter alia*, (a) define BCI and HSBI for the purposes of this proceeding, (b) limit access to, and permissible use of, BCI and HSBI submitted during the proceeding to certain pre-designated persons and at certain designated secure locations where applicable, and (c) provide for the treatment and handling of BCI and HSBI in a party's submissions to the Arbitrator.⁴⁹

2.3. Additionally, the BCI/HSBI Procedures provide that the Arbitrator shall not disclose BCI and HSBI in its Decision but may make statements or draw conclusions that are based on the information drawn from BCI and HSBI. The BCI/HSBI Procedures also provide that, prior to circulating the Decision of the Arbitrator to the WTO membership, the parties shall be given an opportunity to ensure that the Decision does not contain any BCI or HSBI. The relevant paragraphs of the BCI/HSBI Procedures form the "legal basis"⁵⁰ on which the Arbitrator has redacted words or statements that are BCI or HSBI from the public version of this Decision. Accordingly, the text of the version circulated to Members is identical to the text of the confidential version issued to the parties, with the exception of passages that are redacted to protect BCI and HSBI. Such passages have been replaced by "[***]" and "[[HSBI]]", respectively.

2.4. In the adoption and application of the BCI/HSBI Procedures, the Arbitrator has strived to "ensure that an appropriate balance is struck between the need to guard against the risk of harm that could result from the disclosure of particularly sensitive information, on the one hand, and the

⁴⁶ European Union's communication (12 February 2020).

⁴⁷ Arbitrator's communication to the parties regarding the United States' request for extension of the date for responses to questions, (14 February 2020), Annex C-3.

⁴⁸ See Additional Working Procedures for the Protection of Business Confidential Information and Highly Sensitive Business Information, Annex A-2.

⁴⁹ The BCI/HSBI Procedures, as originally adopted, additionally provided that the Arbitrator would, in consultation with the parties, establish appropriate procedures for return and destruction of BCI and HSBI submitted by the parties to the Arbitrator in due course, but at no time later than the Conclusion of the Arbitration Process as defined in the BCI/HSBI Procedures. Such procedures were adopted on 9 October 2020.

⁵⁰ Appellate Body Report, *US – Tuna II (Mexico) (Article 21.5 – Mexico)*, para. 5.4.

integrity of the adjudication process ... and the rights of and systemic interests of the WTO membership at large, on the other hand".⁵¹ We have also tried to ensure that the public version of the Decision circulated to all Members of the WTO is comprehensible.⁵² Having said that, we consider it important to note that a substantial portion of the evidence submitted by the parties in this proceeding is protected under the BCI/HSBI Procedures and that, therefore, the Arbitrator has had to have reference to information designated as BCI or HSBI.

2.5. In accordance with the BCI/HSBI Procedures, the parties on 2 October 2020 submitted specific requests regarding the redaction of confidential information from the public version of this Decision and on 6 October 2020 submitted comments on each other's requests. In response to these communications, we made appropriate changes to the public version of our Decision.

2.2 Public presentation of the parties' opening statements

2.6. At the organizational meeting, both parties agreed that the substantive meeting of the Arbitrator with the parties should be made available to the public to the extent that it was reasonable to do so. In this context, recognizing the need to protect the confidentiality of BCI and HSBI that could be referred to at the substantive meeting, both parties agreed that additional working procedures should be adopted for the substantive meeting of the parties with the Arbitrator. On 6 December 2019, the Arbitrator adopted Additional Working Procedures for the Substantive Meeting with the Arbitrator (Additional Working Procedures).⁵³ The Additional Working Procedures address issues pertaining to the treatment of BCI and HSBI during the substantive meeting generally, as well as issues more specifically pertaining to the parts of the meeting intended to be made available to the public.

2.7. The substantive meeting of the Arbitrator with the parties was held from 28-30 January 2020, during which the parties' opening oral statements were recorded for a later presentation to the public in accordance with the terms of the Additional Working Procedures. The parties were invited to a preview of the video recording on 10 February 2020, which both parties attended and at which the parties identified utterances of BCI during the opening oral statements that were later deleted before the public presentation. The public presentation of the redacted recording of the parties' opening oral statements took place on 5 March 2020 at the WTO.

2.3 The United States' allegations regarding the European Union's use of certain US HSBI submitted in the DS316 arbitration proceeding

2.8. Shortly prior to the close of business on 27 January 2020, the day before the substantive meeting of the Arbitrator with the parties, the United States sent a letter to the Chairperson of the Arbitrator objecting to the alleged improper use of US HSBI by the European Union in its written responses to Arbitrator question Nos. 23 and 26 submitted by the European Union on 21 November 2019. Specifically, the United States complained that the European Union had included certain information related to the methodology and related terminology used by Boeing to calculate the "Boeing Net Price" and "Boeing Gross Price" which had been provided by Boeing to the United States and had been in turn submitted as US HSBI in the DS316 arbitration proceeding. The United States argued that the European Union's submission in this proceeding of information that had been designated as US HSBI in the DS316 arbitration proceeding was improper. The United States further considered that, under the terms of the BCI/HSBI procedures in place in the DS316 arbitration proceeding, the European Union should previously have destroyed all US HSBI in its possession. Thus, the United States considered that this information was no longer validly in the European Union's possession and had been disclosed by the European Union in this proceeding in violation of the BCI/HSBI procedures in the DS316 arbitration proceeding. The United States requested the Arbitrator to instruct the European Union to re-submit its responses to the Arbitrator's question Nos. 23 and 26 with all references to improperly sourced US HSBI duly removed and to instruct the European Union and WTO authorized persons to destroy all copies of the European Union's responses containing references to improperly sourced US HSBI.⁵⁴

⁵¹ Appellate Body Reports, *US – Tuna II (Mexico) (Article 21.5 – Mexico)*, para. 5.3; and *EC and certain member States – Large Civil Aircraft*, Annex III, Procedural Ruling of 10 August 2010, para. 15.

⁵² Appellate Body Report, *Japan – DRAMS (Korea)*, para. 279.

⁵³ See Additional Working Procedures for the Substantive Meeting with the Arbitrator, Annex A-3.

⁵⁴ United States' communication (27 January 2020).

2.9. In a letter to the Arbitrator dated 31 January 2020, the European Union objected "in the strongest terms" to the United States' allegations. The European Union stated that it did not include US HSBI material from the DS316 arbitration proceeding in its responses to the Arbitrator's questions and that it had not shared US HSBI from the DS316 arbitration proceeding with Airbus. Rather, the European Union had obtained the information on the elements of Boeing's pricing contained in its responses to Arbitrator question Nos. 23 and 26 exclusively from Airbus. Moreover, the European Union confirmed that, as required by the BCI/HSBI procedures in that proceeding, the European Union had destroyed all US HSBI material from the DS316 arbitration proceeding within the time limits set by the DS316 arbitrator. The European Union requested that the Arbitrator reject the United States' allegations as unsupported and without merit. Additionally, the European Union expressed regret that the United States had chosen to raise its concerns in a letter filed more than two months after receiving the European Union's responses to the Arbitrator's questions and "a mere 15 minutes before the close of business on the day before the oral hearing". Finally, the European Union argued that the United States' action had the result of depriving the Arbitrator and the European Union of the opportunity for an exchange of views at the substantive meeting on the issues covered by the European Union's responses to the particular questions of the Arbitrator, thereby compromising the European Union's due process rights. It therefore requested the Arbitrator to issue a ruling to the effect that the United States should not be allowed to develop further its arguments and evidence on those issues for the remainder of this proceeding.⁵⁵

2.10. On 4 February 2020, the United States referred to the European Union's letter of 31 January 2020, noting that it had no basis to question the veracity of the European Union's assertions that it had obtained the relevant Boeing pricing information from its discussions with Airbus, and accordingly withdrew its objections to the use of the information in the European Union's response to Arbitrator question Nos. 23 and 26.⁵⁶

2.11. The Arbitrator sent a communication to the parties on 6 February 2020 in which it noted that the United States' withdrawal of its objections to the use of the information in the European Union's response to Arbitrator question Nos. 23 and 26 effectively made moot the United States' objection and associated requests for Arbitrator action included in its letter of 27 January 2020. Therefore, the Arbitrator considered it unnecessary, and accordingly declined, to rule on the United States' objection and its associated requests for Arbitrator action. With regard to the European Union's allegation that the United States had compromised its due process rights, the Arbitrator stated that it was unable to discern a way in which the European Union was deprived of a meaningful opportunity to comment on any particular issue before the Arbitrator relating to the topics covered in question Nos. 23 and 26. It further noted that the European Union had had an opportunity to comment on the issues presented by the Arbitrator in question Nos. 23 and 26 in its responses to those questions, and that the European Union would have an opportunity to further offer its comments with respect to these issues following the Arbitrator's second set of questions to the parties.⁵⁷

2.4 Impact of the Covid-19 pandemic on the work of the Arbitrator

2.12. The Arbitrator issued a series of communications to the parties related to facilitating the work of the Arbitrator in the light of the difficulties arising from the Covid-19 pandemic.⁵⁸ In particular, on 1 April 2020, the Arbitrator informed the parties that the WTO Director-General had directed that all staff members (with the exception of certain "critical" staff members) should work from home as of 16 March 2020, until the end of April 2020, due to concerns arising from the Covid-19 pandemic. The Arbitrator indicated that these restrictions on Secretariat access to the WTO premises had implications for the Secretariat's ability to work with HSBI, which could not be stored, or accessed from, outside the WTO premises under the BCI/HSBI Procedures. The Arbitrator therefore asked the parties if they would be willing to waive relevant restrictions imposed by those procedures in order to enable certain Secretariat staff to store and work with the parties' HSBI at their homes, and to

⁵⁵ European Union's communication (31 January 2020).

⁵⁶ United States' communication (4 February 2020).

⁵⁷ Arbitrator's communication to the parties regarding certain HSBI, (6 February 2020), Annex C-2.

⁵⁸ See Arbitrator's communication to the parties regarding restrictions on access to the WTO premises and to HSBI due to Covid-19, (1 April 2020), Annex C-4; Arbitrator's communication to the parties regarding access to HSBI in the context of Covid-19, (23 April 2020), Annex C-5; and Arbitrator's communication to the parties regarding phased relaxation of restrictions on access to WTO premises due to Covid-19, (4 May 2020), Annex C-6.

discuss HSBI over secure communications platforms.⁵⁹ On 8 April 2020, the parties responded to this communication but there was a lack of agreement between the parties as to whether the proposed alternative arrangements for working with HSBI should be implemented.

2.13. On 23 April 2020, the Arbitrator informed the parties that, in the light of the parties' lack of agreement on whether to implement alternative HSBI storage and access arrangements as proposed in its communication of 1 April 2020, the Arbitrator would not implement such alternative arrangements. The Arbitrator assured the parties that it would continue advancing its work in this proceeding while the restrictions on access to the WTO premises remained in effect, and would make every effort to minimize the effects of the Covid-19 pandemic on the Arbitrator's work.⁶⁰

2.14. On 4 May 2020, the Arbitrator informed the parties that a phased reintroduction of Secretariat staff to the WTO premises was planned to begin on 11 May 2020 (at which time Secretariat staff members assisting the Arbitrator could once again begin to access HSBI). Further, the Arbitrator informed the parties that the Arbitrator continued to make progress with its work in this proceeding, and expected to continue to do so while restrictions on access to the WTO premises remained in effect.⁶¹

2.15. On 17 June 2020, the Arbitrator informed the parties that it had carefully considered the adjustments required by the Covid-19 pandemic, and that, in the light of such adjustments, the earliest time that it expected to provide the Decision to the parties for purposes of ensuring proper redaction of BCI and HSBI would be the end of September 2020.⁶² The European Union sent a subsequent communication to the Arbitrator on 22 June 2020 objecting to that estimated date. In response, on 26 June 2020, the Arbitrator assured the parties that, despite the multiple challenges arising from the Covid-19 pandemic that impaired the Secretariat's and Arbitrator's modalities for work and that greatly affected their workplaces, families, communities, and countries, the Arbitrator was working diligently towards fulfilling the Arbitrator's mandate in this proceeding.⁶³

2.16. Further, on 5 and 19 August 2020 (in response to a letter from the European Union on 10 August 2020), the Arbitrator issued communications to the European Union indicating that the Covid-19 pandemic had presented serious challenges for air travel and, as a result, the Arbitrator was considering conducting its final meetings remotely. In such communications, the Arbitrator therefore requested the European Union's permission for the Arbitrator and other WTO Approved persons to discuss certain, limited amounts of European Union HSBI on Skype for Business in order to facilitate such potential remote meetings of the Arbitrator.⁶⁴ The European Union agreed to these requests.

2.5 The United States' request for leave to file an additional submission regarding the purported elimination of the Washington State B&O tax rate reduction as of 1 April 2020

2.17. On 13 May 2020, the Arbitrator received a letter from the United States advising that the State of Washington had, effective 1 April 2020, eliminated the B&O tax rate reduction. In that letter, the United States requested leave to file an additional "Submission of the United States regarding the Withdrawal of the Washington State B&O Tax Rate Subsidy", attached to the letter of 13 May 2020, and purporting to set out "the implications of the elimination of this measure on the permitted level of countermeasures".⁶⁵ The European Union responded to the United States' letter on 20 May 2020, arguing that the Arbitrator should reject the United States' request. The United States submitted a reply to the European Union's response on 22 May 2020. The

⁵⁹ Arbitrator's communication to the parties regarding restrictions on access to the WTO premises and to HSBI due to Covid-19, (1 April 2020), Annex C-4.

⁶⁰ Arbitrator's communication to the parties regarding access to HSBI in the context of Covid-19, (23 April 2020), Annex C-5.

⁶¹ Arbitrator's communication to the parties regarding phased relaxation of restrictions on access to WTO premises due to Covid-19, (4 May 2020), Annex C-6.

⁶² Arbitrator's decision on the United States' request for leave to file an additional submission regarding the implications of the purported elimination of the Washington State B&O tax rate reduction on the permitted level of countermeasures, (17 June 2020), Annex C-7.

⁶³ Arbitrator's communication to the parties, (26 June 2020), Annex C-8.

⁶⁴ Arbitrator's communication to the parties requesting authorization to discuss specific EU HSBI, (5 August 2020), Annex C-9; and Arbitrator's communication to the parties requesting authorization to discuss additional specific EU HSBI, (19 August 2020), Annex C-10.

⁶⁵ United States' communication (13 May 2020).

European Union was invited by the Arbitrator, but declined, to submit further comments on the United States' reply.

2.18. On 17 June 2020, the Arbitrator issued a ruling denying leave on the grounds that the United States' request for leave lacked substantive merit, was untimely, and/or was moot, and that filing an additional submission was accordingly neither necessary for purposes of rebuttal nor supported by good cause. The Arbitrator's ruling on the United States' request is appended to this Decision at Annex C-7.

3 MANDATE OF THE ARBITRATOR

3.1. This arbitration proceeding results from the United States' objection to the European Union's request for countermeasures. In having recourse to arbitration under Article 22.6 of the DSU, the United States objects to the level of countermeasures contained in the European Union's request for authorization to take countermeasures under Article 22.2 of the DSU and Article 7.9 of the SCM Agreement. The United States also claims that the principles and procedures set forth in Article 22.3 of the DSU have not been followed.

3.2. Article 7.9 of the SCM Agreement provides that if certain conditions are met, "the DSB shall grant authorization to the complaining Member to take countermeasures, commensurate with the degree and nature of the adverse effects determined to exist, unless the DSB decides by consensus to reject the request." Article 7.10 of the SCM Agreement provides that "in the event that a party to the dispute requests arbitration under paragraph 6 of Article 22 of the DSU, the arbitrator shall determine whether the countermeasures are commensurate with the degree and nature of the adverse effects determined to exist."

3.3. This arbitration proceeding is governed by both Article 7.10 of the SCM Agreement and Article 22.6 of the DSU.⁶⁶ Article 22.7 of the DSU defines the mandate for an arbitrator acting exclusively under Article 22.6; that is, the arbitrator "shall determine whether the level of suspension is equivalent to the level of nullification or impairment". Article 7.10 of the SCM Agreement defines the mandate of an arbitrator somewhat differently. It states that in the event that a party to a dispute requests arbitration under Article 22.6 of the DSU, the arbitrator "shall determine whether the countermeasures are commensurate with the degree and nature of the adverse effects determined to exist". In accordance with the status of Article 7.10 of the SCM Agreement as one of the special or additional rules and procedures listed in Appendix 2 of the DSU, we conduct this arbitration with reference to the mandate set out in Article 7.10 of the SCM Agreement.⁶⁷

3.4. Articles 7.9 and 7.10 constitute "special or additional rules and procedures" under Appendix 2 of the DSU. According to Article 1.2 of the DSU, "to the extent that there is a difference between the rules and procedures of this Understanding and the special or additional rules and procedures set forth in Appendix 2, the special or additional rules and procedures in Appendix 2 shall prevail".

3.5. As indicated in Article 7.10, our mandate in this arbitration proceeding is to determine whether the countermeasures proposed by the European Union are "commensurate with the degree and nature of the adverse effects determined to exist". However, should we find that the level of countermeasures proposed by the European Union is not commensurate, we must go on to make our own determination of the level of countermeasures that is commensurate with the degree and nature of adverse effects determined to exist.⁶⁸ Similarly, should we determine that the methodology proposed by the European Union for calculating the level of countermeasures, or any alternative methodology proposed by the United States, has shortcomings and is not appropriate, as presented,

⁶⁶ Article 7.10 refers explicitly to a request for arbitration under Article 22.6 of the DSU, thereby confirming that arbitrations governed by Article 7.10 of the SCM Agreement are, at the same time, governed by Article 22.6 of the DSU. Article 4.11 of the SCM Agreement, which begins with an introductory clause that states: "In the event a party to the dispute requests arbitration under paragraph 6 of Article 22 of the {DSU}", likewise confirms that arbitrations under Article 4.11 are, at the same time, arbitrations under Article 22.6 of the DSU.

⁶⁷ This is consistent with the approach of the DS316 arbitrator, another arbitration under Article 7.10 of the SCM Agreement. (Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 3.4 and fn 75 thereto)

⁶⁸ See Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 3.4 and authorities referred to in fn 76 thereto.

we may either make appropriate adjustments, or develop another, appropriate, methodology ourselves.⁶⁹

3.6. In that context, regarding the standard that governs our assessment of the assumptions underlying the parties' proposed methodologies, we agree with previous arbitrators' statements to the effect that any "'assumptions {used by the parties' methodologies} should be reasonable, taking into account the circumstances of the dispute'. We also find relevant the finding made in several arbitration proceedings that assumptions should be based on 'credible, factual, and verifiable information'".⁷⁰ Furthermore, our assessment of the parties' arguments and the evidence on the record must be performed in an objective manner.

3.7. The general provisions of Article 22.7 of the DSU are also relevant to our mandate. They specify that "if the matter referred to arbitration includes a claim that the principles and procedures set forth in {Article 22.3 of the DSU} have not been followed, the arbitrator shall examine that claim". It is therefore also within our mandate to examine the United States' claim that the European Union did not follow the principles and procedures set forth in Article 22.3 of the DSU. While the United States' objection to the level of suspension of concessions or other obligations included a claim that the principles and procedures set forth in Article 22.3 of the DSU have not been followed by the European Union in considering what countermeasures to take, the United States does not pursue that claim in its submissions in this proceeding.

4 BURDEN OF PROOF

4.1. The United States, in having recourse to arbitration under Article 22.6 of the DSU, objects to the level of countermeasures proposed by the European Union.

4.2. The United States submits that it therefore bears the initial burden of establishing a *prima facie* case that the countermeasures proposed by the European Union are not commensurate with the degree and nature of the adverse effects determined to exist. It considers that, having done this, the burden then shifts to the European Union to rebut the United States' case.⁷¹ The European Union argues that the United States bears the burden of proof and the burden of persuasion that the European Union's methodology results in countermeasures that are "inconsistent" with Articles 7.9 and 7.10 of the SCM Agreement; i.e. that the United States must establish that the countermeasures proposed by the European Union are not "commensurate with the degree and nature of the adverse effects determined to exist."⁷² The European Union refers to three paragraphs from the decision of the DS316 arbitrator regarding the allocation of the burden of proof where the original respondent objects to the level of countermeasures. The relevant portions of these paragraphs are as follows:

It is clear from previous arbitrations under Article 22.6, and the parties do not dispute, that the party challenging the proposed countermeasures bears the burden of establishing a *prima facie* case that such countermeasures are inconsistent with the relevant requirements of the SCM Agreement and/or the DSU. Thereafter, the burden shifts to the party proposing the countermeasures to rebut such *prima facie* case. ...

In the present proceeding, therefore, the European Union bears the burden to submit arguments and evidence sufficient to establish a *prima facie* case that the countermeasures proposed by the United States are not "commensurate with the degree and nature of the adverse effects determined to exist" and are, consequently, inconsistent with Article 7.9. To satisfy its burden of proof, the European Union must

⁶⁹ Decisions by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 3.4; and *US – Tuna II (Mexico) (Article 22.6 – US)*, para. 5.152.

⁷⁰ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.173 (quoting *US – Tuna II (Mexico) (Article 22.6 – US)*, para. 5.16 (fn omitted) (in turn quoting Decisions by the Arbitrator, *US – COOL (Article 22.6 – United States)*, para. 4.5; *US – Gambling (Article 22.6 – US)*, para. 3.3; and *US – 1916 Act (EC) (Article 22.6 – US)*, para. 5.54)). See also Decision by the Arbitrator, *US – Washing Machines (Article 22.6 – US)*, para. 3.127 (indicating that "'it is necessary to rely only on credible, verifiable information, and not on speculation' in calculating the level of nullification or impairment") (quoting Decision by the Arbitrator, *US – 1916 Act (EC) (Article 22.6 – US)*, para. 5.63).

⁷¹ United States' response to Arbitrator question No. 1, para. 5.

⁷² European Union's response to Arbitrator question No. 1, para. 5; but see European Union's written submission, paras. 2-4, 6, 27, 124, 125, 134, 162-163, 165, 171, 179, 184, 186, 218, 230, 237, 243, 277, 286, 345, 361, 386, and 405.

engage with the methodology used by the United States to arrive at the proposed level of countermeasures, and it is "not sufficient merely to assert that another methodology is more appropriate". If the European Union meets its burden, it is for the United States, thereafter, to submit arguments and evidence sufficient to rebut the *prima facie* case established by the European Union. ...

Furthermore, each party has the duty to produce evidence in support of its assertions of fact and to collaborate with an Article 22.6 arbitrator in presenting evidence.⁷³

4.3. The burden shifting framework to which the United States and the DS316 arbitrator allude has long been referred to by the Appellate Body, dispute settlement panels and Article 22.6 arbitrators.⁷⁴ For present purposes, it is sufficient to state that we regard the United States, as the party challenging the proposed level of countermeasures, to bear the overall burden of demonstrating that the European Union's methodology results in countermeasures that are not "commensurate" with the degree and nature of the adverse effects determined to exist. To discharge that burden, it is not sufficient for the United States merely to propose an alternative methodology that it asserts is more appropriate. Rather, the United States must engage with the methodology used by the European Union, in the sense that the United States must demonstrate why that methodology would result in countermeasures that are not "commensurate" within the meaning of Article 7.10 of the SCM Agreement.

4.4. We agree with the DS316 arbitrator that each party has the duty to produce evidence in support of its assertions of fact and to collaborate with an Article 22.6 arbitrator in presenting evidence. Consistent with this duty and prior arbitrations, we requested that, as a first step in the proceeding, the European Union as the party seeking authorization to take countermeasures submit a methodology paper substantiating how it arrived at the proposed countermeasures.⁷⁵

5 THE DS316 PROCEEDINGS AND THE DS316 ARBITRATOR'S VALUATION OF ADVERSE EFFECTS

5.1. This arbitration proceeding is the third occasion on which an arbitrator acts under both Article 7.10 of the SCM Agreement and Article 22.6 of the DSU.⁷⁶ Of particular relevance to this proceeding is the decision of the DS316 arbitrator in the arbitration proceeding arising from the dispute initiated by the United States concerning certain measures by the European Union and certain member states affecting trade in LCA.⁷⁷ In particular, we note that the parties often present their arguments and valuation methodologies in this proceeding as being supported by, or as justified departures from, methodologies adopted by the DS316 arbitrator (which valued significant lost sales and impedance caused by sales of subsidized LCA).

5.2. As explained in more detail below, the DS316 arbitration involved the valuation of adverse effects in the form of lost sales and impeded deliveries of 47 747-8Is, 20 777-300ERs, 30 787-10s, and an additional number of 747-8I sales, in each case in the period December 2011-December 2013. Expressed in 2013 US dollar terms, the annualized value of these adverse effects was calculated to be USD 7,496.623 million.⁷⁸

5.3. The DS316 arbitration proceeding, like the present proceeding, involved the valuation of adverse effects in the LCA industry. Both proceedings concern the valuation of lost sales and impeded

⁷³ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, paras. 4.2-4.4. (fns omitted)

⁷⁴ See e.g. Appellate Body Reports, *US – Wool Shirts and Blouses*, p. 14; *EC – Hormones*, para. 104; *US – Upland Cotton*, para. 644; and *US – Carbon Steel (India)*, para. 4.505; Panel Reports, *EU – Energy Package*, para. 7.8; *Russia – Pigs (EU)*, para. 7.589; and *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, para. 6.50; and Decisions by the Arbitrator, *US – FSC (Article 22.6 – US)*, para. 2.10; and *US – Gambling (Article 22.6 – US)*, para. 2.22.

⁷⁵ See para. 1.29 above. See also Decision by the Arbitrators, *EC – Hormones (US) (Article 22.6 – EC)*, para. 11.

⁷⁶ The two other arbitrations conducted under Article 7.10 of the SCM Agreement and Article 22.6 of the DSU are *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)* and *US – Upland Cotton (Article 22.6 – US II)*.

⁷⁷ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*.

⁷⁸ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.500.

deliveries of particular sizes and models of LCA at particular points in time. Both parties agree in principle that the Arbitrator should approach specific valuation issues consistently with the approach taken to those same issues by the DS316 arbitrator. However, there are also important differences between the two disputes including, notably, the subsidies at issue and the causal mechanisms through which they resulted in the adverse effects in question, the specific adverse effects findings (including the forms of serious prejudice, the aircraft concerned and the time periods in question), as well as the parties' arguments and the evidence presented. In certain circumstances, these differences may justify, or even require, this Arbitrator to adopt different valuation approaches to those of the DS316 arbitrator. In addition, the parties have, throughout their arguments, relied on aspects of the DS316 arbitrator's decision in support of their positions in this proceeding. For this reason, portions of our decision in this proceeding involve extensive discussion and consideration of aspects of the DS316 arbitrator's decision.

5.4. With those considerations in mind, we summarize below the key elements of the DS316 proceedings that are relevant to the valuation issues before us in this arbitration proceeding.

5.1 The DS316 original proceedings

5.5. The DS316 dispute originally commenced with a request for consultations by the United States on 6 October 2004, and a request for establishment of a panel on 31 May 2005.⁷⁹ The United States originally claimed that the European Union and certain of its member States, namely, France, Germany, Spain, and the United Kingdom (UK), had caused, through the use of specific subsidies, adverse effects to the United States' interests in the form of serious prejudice under Articles 5(c) and 6.3 of the SCM Agreement. In addition, the United States also claimed that certain subsidies were prohibited subsidies within the meaning of Article 3.1(a) and footnote 4 of the SCM Agreement and, therefore, pursuant to Article 3.2 of the SCM Agreement, they must not be granted or maintained. The original panel found that the following specific subsidies related to the production and development of LCA were inconsistent with Articles 5(c) and 6.3(a), (b), and (c) of the SCM Agreement: (a) "launch aid" or "member State financing" (LA/MSF) for the A300, A310, A320, A330, A330-200, A340, A340-500/600 and A380 models of Airbus LCA; (b) French and German government "equity infusions" provided in connection with the corporate restructuring of French and German aerospace manufacturers, *Aérospatiale Société Nationale Industrielle* and *Deutsche Airbus GmbH*; (c) certain infrastructure and infrastructure-related measures provided by the German and Spanish authorities to Airbus in the form of, *inter alia*, regional development grants; and (d) certain research and technological development (R&TD) funding provided to Airbus for LCA-related R&TD projects in which Airbus participated. In addition, the original panel found that the United States had established that the German, Spanish, and UK LA/MSF for the A380 constituted prohibited export subsidies within the meaning of Article 3.1(a) of the SCM Agreement.

5.6. On appeal, the Appellate Body reversed the original panel's finding that the German, Spanish and UK A380 LA/MSF contracts constituted prohibited export subsidies under Article 3.1(a) of the SCM Agreement, but was unable to complete the analysis with regard to Article 3.1(a) due to insufficient factual findings or undisputed facts on the panel record. The Appellate Body further reversed or modified several other aspects of the original panel's findings, and completed the legal analysis where it considered that it had sufficient factual findings or undisputed facts on the record. With regard to issues of subsidization and adverse effects, the Appellate Body completed the analysis and ultimately concluded that: (a) the use of the challenged LA/MSF measures had caused adverse effects to the United States' interests; and (b) the equity infusions and infrastructure measures (but not the R&TD subsidies) that were found by the original panel to constitute specific subsidies "complemented and supplemented" the effects of the LA/MSF measures. The Appellate Body upheld the original panel's recommendation pursuant to Article 7.8 of the SCM Agreement, and recommended that the DSB request the European Union to bring its measures that were found to be inconsistent with the SCM Agreement into conformity with its obligations under that Agreement.⁸⁰

5.7. The DSB adopted the Appellate Body report and the original panel report, as modified by the Appellate Body report, on 1 June 2011.⁸¹

⁷⁹ Request for consultations by the United States, WT/DS316/1; and Request for the establishment of a Panel by the United States, WT/DS316/2.

⁸⁰ Appellate Body Report, *EC and certain member States – Large Civil Aircraft*, paras. 1416 and 1418.

⁸¹ DSB, Minutes of the meeting held on 1 June 2011, WT/DSB/M/297.

5.2 The DS316 compliance proceedings

5.8. On 1 December 2011, the European Union informed the DSB that it had "taken appropriate steps" to bring its measures into conformity with its WTO obligations, thereby ensuring "full implementation of the DSB's recommendations and rulings".⁸² On 30 March 2012, following a request for consultations with the European Union and the four member States, the United States requested the establishment of a panel pursuant to Article 21.5 of the DSU with standard terms of reference.⁸³ The panel was established by the DSB on 13 April 2012.⁸⁴

5.9. Before the compliance panel, the United States argued that the relevant subsidies found to have caused adverse effects in the original proceedings continued to cause adverse effects and that, by agreeing to provide Airbus with LA/MSF for the A350XWB family of aircraft, the four member States have "continued and even expanded" the subsidization of Airbus' LCA activities, thereby causing "additional adverse effects" within the meaning of Articles 5(c) and 6.3 of the SCM Agreement.⁸⁵

5.10. The compliance panel report was circulated on 22 September 2016. The compliance panel found, *inter alia*, that the French, German, Spanish, and UK A350XWB LA/MSF measures fell within the scope of the compliance proceedings and that the United States had demonstrated that these measures were specific subsidies within the meaning of Articles 1 and 2 of the SCM Agreement.

5.11. With regard to Article 7.8 of the SCM Agreement, the compliance panel found that the European Union had demonstrated that the *ex ante* "lives" of (a) the French, German, and Spanish LA/MSF subsidies for the A300B/B2/B4, A300-600, A310, A320 and A330/A340; (b) the UK LA/MSF subsidies for the A320 and A330/A340; and (c) the capital contribution subsidies, had "expired" before June 2011, while (d) the *ex ante* "lives" of the French LA/MSF subsidies for the A330-200 and the French and Spanish LA/MSF subsidies for the A340-500/600 had "expired", respectively, on dates that were classified as BCI, and (e) that the *ex ante* "lives" of five regional development grant subsidies would not "expire" until sometime between 2054 and 2058, while the other two "expired" around 2014.

5.12. The compliance panel also found that the fact that one or more of the subsidies challenged in the compliance proceedings may have ceased to exist prior to 1 June 2011 did not *ipso facto* mean that the European Union and the four member States did not have a compliance obligation under the terms of Article 7.8 of the SCM Agreement in relation to those subsidies.⁸⁶ Further, the compliance panel found that the fact that the *ex ante* "lives" of certain subsidies had "passively 'expired'" before the end of the implementation period, did not amount to "withdrawal" of those subsidies for the purpose of Article 7.8, and that the European Union had therefore failed to comply with the obligation to "withdraw the subsidy" for purposes of Article 7.8.⁸⁷

5.13. With regard to the obligation under Article 7.8 to take appropriate steps to remove the adverse effects, the compliance panel found that:

⁸² Communication by the European Union, WT/DS316/17, para. 5.

⁸³ Request for the establishment of a panel by the United States, WT/DS316/23.

⁸⁴ DSB, Minutes of the meeting held on 13 April 2012, WT/DSB/M/314.

⁸⁵ Panel Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, para. 6.3. We note that two compliance panels have been established in the DS316 proceedings thus far. For ease of reference, we refer to the first compliance panel in the DS316 dispute as the "compliance panel". The second compliance panel, which we do not discuss in this Decision, was established on 15 August 2018 and circulated its report on 2 December 2019.

⁸⁶ Panel Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, para. 6.841. The compliance panel further found that the European Union had failed to demonstrate that the "alleged partial privatization of Aérospatiale in 1999, the transactions leading to the creation of EADS in 2000 and BAE Systems' 2006 sale of its 20% ownership stake in Airbus SAS to EADS, were 'intervening events' that resulted in the 'extinction' of the benefit of all of the subsidies at issue in this proceeding that were granted prior to those transactions", and rejected also the European Union's arguments on "extraction" of subsidies, which had been rejected by the original panel and the Appellate Body in the original proceedings. (See Panel Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, para. 7.1.d.i-vi)

⁸⁷ Panel Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, para. 7.1.d.viii-ix.

- a. the direct and indirect effects of the aggregated pre-A350XWB LA/MSF subsidies continued to be a genuine and substantial cause of the current market presence of the A320, A330 and A380, using either the "plausible" or "unlikely" counterfactual scenarios adopted in the original proceedings in relation to the effects of the same subsidies in the 2001 to 2006 period as the starting point of the analysis⁸⁸;
- b. the direct and indirect effects of the aggregated LA/MSF subsidies (i.e. including the A350XWB LA/MSF subsidies) were a genuine and substantial cause of the current market presence of the A350XWB using either the "plausible" or "unlikely" counterfactual scenarios adopted in the original proceedings in relation to the effects of the pre-A350XWB LA/MSF subsidies in the 2001-2006 period as the starting point of the analysis; and
- c. the so-called "product" effects of these subsidies were a genuine and substantial cause of:
 - i. displacement and/or impedance of imports of a like product of the United States into the markets for (i) single-aisle LCA, (ii) twin-aisle LCA, and (iii) very large aircraft (VLA) in the European Union, within the meaning of Article 6.3(a) of the SCM Agreement;
 - ii. displacement and/or impedance of exports from the markets for (i) single-aisle LCA in Australia, China, and India, (ii) twin-aisle LCA in China, Korea and Singapore, and (iii) VLA in Australia, China, Korea, Singapore and the United Arab Emirates, within the meaning of Article 6.3(b) of the SCM Agreement; and
 - iii. significant lost sales in the global markets for (i) single-aisle LCA, (ii) twin-aisle LCA, and (iii) VLA, within the meaning of Article 6.3(c) of the SCM Agreement.⁸⁹

5.14. The compliance panel also found that the effects of the aggregated non-LA/MSF subsidies (i.e. the capital contribution subsidies and certain regional development grants) "complement and supplement" the "product" effects of the aggregated LA/MSF subsidies and, therefore, were a "genuine" cause of serious prejudice to the interests of the United States, within the meaning of Article 5(c).⁹⁰

5.15. Having found that the challenged subsidies caused present serious prejudice to the United States' interests, within the meaning of Article 5(c) of the SCM Agreement, the compliance panel made no findings with respect to the United States' conditional claim that the challenged subsidies threatened to cause serious prejudice to its interests.⁹¹

5.16. On 13 October 2016, the European Union notified the DSB of its intention to appeal certain issues of law covered in the compliance panel report and certain legal interpretations developed by the compliance panel, and filed a Notice of Appeal pursuant to Article 20 of the Working Procedures for Appellate Review.⁹²

5.17. As regards the aspects of the appeals related to Article 7.8 of the SCM Agreement, the Appellate Body reversed the compliance panel's interpretation of Article 7.8. According to the compliance panel, the obligation under Article 7.8 to "withdraw the subsidy" or "take appropriate steps to remove the adverse effects" needed to be understood as requiring an implementing Member

⁸⁸ Panel Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, para. 7.1.d.xii.

⁸⁹ Panel Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, para. 7.1.d.xiv-xvi.

⁹⁰ Panel Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, para. 7.1.d.xvii. The compliance panel found, however, that the United States had failed to demonstrate that the Spanish regional development grants used for Airbus' military aircraft activities benefited Airbus' LCA activities and thus failed to establish that these subsidies complement and supplement the "product" effects of the LA/MSF subsidies. (Panel Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, para. 7.1.d.xviii)

⁹¹ Panel Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, para. 7.1.d.xix.

⁹² Notification of appeal by the European Union, WT/DS316/29. The United States notified the DSB of its intention to appeal certain issues of law covered in the compliance panel report and certain legal interpretations developed by the compliance panel, and filed a Notice of Appeal and other appellant's submission pursuant to Article 23 of the Working Procedures for Appellate Review on 10 November 2016. (Notification of appeal by the United States, WT/DS316/30)

to take appropriate action with respect to the subsidy or the relevant market that would bring it into conformity with the effects-based disciplines of Article 5 of the SCM Agreement. For the compliance panel, this was so irrespective of whether the subsidy previously found to have caused adverse effects "expired" prior to the end of the relevant implementation period. The Appellate Body disagreed and found that Article 7.8 did not impose a compliance obligation with respect to subsidies that "expired" prior to the end of the implementation period. Consequently, the Appellate Body concluded that the European Union had no compliance obligation with respect to subsidies that had "expired" before 1 December 2011.⁹³

5.18. The Appellate Body therefore considered that the pertinent question for purposes of the compliance proceedings was whether the subsidies existing in the *post*-implementation period (i.e. after 1 December 2011) caused adverse effects. Accordingly, the Appellate Body focused its review on the compliance panel's analysis and findings regarding the effects of the A380 LA/MSF and the A350XWB LA/MSF subsidies, as the subsidies that existed in the post-implementation period.

5.19. As to the European Union's appeal of aspects of the compliance panel's causation analysis regarding the effects of the A380 LA/MSF and the A350XWB LA/MSF subsidies, as the only subsidies that existed in the post-implementation period, the Appellate Body found that the original panel's findings, together with the compliance panel's analysis, indicated that:

- a. the A380 LA/MSF had "direct effects" on Airbus' ability to launch, bring to market, and continue developing the A380 as and when it did, given that the A380 LA/MSF subsidies had not expired, as well as the fact that Airbus continued to receive disbursements under the French, German, and Spanish LA/MSF contracts at a time when it was experiencing severe financial difficulties resulting from the extensive production delays in the A380 programme⁹⁴; and
- b. the compliance panel's findings regarding the "direct effects" of the A350XWB LA/MSF, read together with its findings regarding the "indirect effects" of the A380 LA/MSF, also indicated that, without the aggregated "product effects" of the existing LA/MSF subsidies for the A380 and A350XWB programmes, Airbus would not have been able to launch the A350XWB as and when it did.⁹⁵

5.20. The Appellate Body reversed all of the compliance panel's findings of significant lost sales and displacement and/or impedance under Articles 6.3(a), 6.3(b) and 6.3(c), in the single-aisle LCA market.⁹⁶ The Appellate Body considered further that it was unable to complete the legal analysis of the United States' claims of displacement and/or impedance in the single-aisle LCA markets in

⁹³ Appellate Body Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, para. 6.11. The Appellate Body additionally upheld the compliance panel's finding that the European Union had demonstrated that the *ex ante* "lives" of the French, German, and Spanish LA/MSF subsidies for the A300B/B2/B4, A300-600, A310, A320, and A330/A340 and the UK LA/MSF subsidies for the A320 and A330/A340 had "expired" before 1 June 2011. (Appellate Body Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, para. 6.12)

⁹⁴ Appellate Body Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, para. 6.22.

⁹⁵ The Appellate Body considered that the compliance panel's findings revealed that the LA/MSF subsidies existing in the post-implementation period, i.e. the A380 and A350XWB LA/MSF subsidies, enabled Airbus to proceed with the timely launch and development of the A350XWB, and to bring to market and to continue developing the A380, and that both such events were crucial to renewing and sustaining Airbus' competitiveness in the post-implementation period. (Appellate Body Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, para. 6.23)

⁹⁶ In this regard, the Appellate Body noted that the compliance panel's findings regarding the "product effects" of LA/MSF subsidies on the market presence of the A320 concerned primarily the effects of subsidies that had "expired" prior to the end of the implementation period. Owing to the absence of analysis by the compliance panel of whether, and to what extent, Airbus' competitiveness in the single-aisle LCA market, gained through the pre-A380 LA/MSF subsidies, was renewed and sustained beyond the original reference period as a result of the subsidies that the European Union granted or maintained in the post-implementation period, the Appellate Body reversed the compliance panel's findings under Articles 6.3(a), 6.3(b), and 6.3(c) of the SCM Agreement, insofar as they related to the single-aisle LCA market. (Appellate Body Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, paras. 6.26-6.27)

Australia, China, and India, and impedance in the single-aisle LCA market in the European Union, or, in the alternative, threat of displacement or impedance in that market.⁹⁷

5.21. The Appellate Body upheld the compliance panel's findings of significant lost sales in the twin-aisle market, based on modified reasoning, finding that the orders identified in Table 19 of the compliance panel report for A350XWBs represented significant lost sales to the US LCA industry and, therefore, that the LA/MSF subsidies existing in the post-implementation period were a genuine and substantial cause of serious prejudice to the United States within the meaning of Article 6.3(c) of the SCM Agreement.⁹⁸

5.22. The Appellate Body reversed the compliance panel's findings of displacement and/or impedance of twin-aisle LCA in the relevant third-country markets.⁹⁹ Moreover, the Appellate Body found that it was unable to complete the legal analysis of the United States' claims of displacement in the twin-aisle markets in China, Korea and Singapore, and impedance in the twin-aisle markets in the European Union, China, Korea and Singapore markets.¹⁰⁰

5.23. The Appellate Body upheld the compliance panel's findings of significant lost sales in the VLA market, based on modified reasoning, finding that the sales of the A380 identified in Table 19 of the compliance panel report represented significant lost sales to the US LCA industry and that the LA/MSF subsidies existing in the post-implementation period continued to be a genuine and substantial cause of serious prejudice to the United States within the meaning of Article 6.3(c) of the SCM Agreement.¹⁰¹

5.24. The Appellate Body reversed the compliance panel's findings of displacement of VLA in certain geographic markets.¹⁰² The Appellate Body further found that it was unable to complete the legal analysis of the United States' claim of displacement in these markets.¹⁰³

⁹⁷ Appellate Body Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, para. 6.29.

⁹⁸ Appellate Body Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, para. 6.31.

⁹⁹ The Appellate Body stated that, while its review of the compliance panel's finding on the "product effects" of LA/MSF subsidies on the A350XWB indicated that, in the absence of the LA/MSF subsidies for the A380 and A350XWB existing in the post-implementation period, Airbus would not have been able to offer the A350XWB at the time it did and with the features the A350XWB had, the United States had "framed" its claim of displacement and/or impedance in the twin-aisle LCA market on the basis of data concerning market shares and deliveries of Airbus and Boeing LCA during the 2011-2013 period. The Appellate Body explained that, as there were no deliveries of the A350XWB during that period, the compliance panel had relied on market share and delivery data relating to the A330, rather than orders of the A350XWB in making its finding. The Appellate Body recalled, moreover, that the compliance panel had found that the "product effects" of LA/MSF subsidies on the A330 concerned primarily the effects of those subsidies that had "expired", and that the Appellate Body had found that the European Union has no compliance obligation with respect to such expired subsidies. The Appellate Body concluded that, because the compliance panel had not explored or made findings on whether, and if so, how, the A380 and A350XWB subsidies existing in the post-implementation period may have contributed to the deliveries of the A330 occurring during that period, it would reverse the compliance panel's conclusion that the "product effects" of the LA/MSF subsidies were a genuine and substantial cause of displacement and/or impedance of United States LCA in the twin-aisle markets in the European Union, China, Korea, and Singapore. (Appellate Body Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, para. 6.33)

¹⁰⁰ Appellate Body Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, para. 6.35.

¹⁰¹ Appellate Body Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, para. 6.37.

¹⁰² Appellate Body Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, para. 6.39. While the Appellate Body's review of the compliance panel's findings, as well as the findings from the original proceedings, indicated that, in the absence of the LA/MSF subsidies existing in the post-implementation period, Airbus would not have been able to offer the A380 at the time that it did, the Appellate Body faulted the compliance panel for failing to examine whether there were any discernible trends in volumes and market shares in the VLA markets at issue, including whether there were declining trends that could have supported the compliance panel's findings. The Appellate Body therefore found that the compliance panel's finding of displacement of US LCA in the VLA markets in the European Union, Australia, Korea and Singapore was not sufficiently supported.

¹⁰³ Appellate Body Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, para. 6.40.

5.25. The Appellate Body found that the compliance panel's finding of impedance of VLA in the European Union, Australia, China, Korea, Singapore and the United Arab Emirates was sufficiently supported by the evidence and therefore upheld (on a modified basis) the compliance panel's impedance findings for VLA in these geographic markets.¹⁰⁴

5.26. Accordingly, in respect of the subsidies existing in the post-implementation period, the Appellate Body upheld (albeit for different reasons), the compliance panel's overall conclusions that, by continuing to be in violation of Articles 5(c) and 6.3(a), (b) and (c) of the SCM Agreement, insofar as the twin-aisle LCA and VLA markets are concerned, the European Union and certain member States had failed to comply with the DSB recommendations and rulings, and in particular, the obligation under Article 7.8 of the SCM Agreement to "take appropriate steps to remove the adverse effects or ... withdraw the subsidy".

5.27. In sum, following the appeal in the compliance proceedings, the compliance panel's findings in respect of the subsidies identified in paragraphs 5.13 and 5.14 above, and the forms of serious prejudice caused by those subsidies identified in paragraph 5.13.c above, were modified by the Appellate Body. As a result of those modifications, (a) the only subsidies found to exist in the post-implementation period were the A350XWB and A380 LA/MSF subsidies and (b) the "product effects" of these LA/MSF subsidies were a genuine and substantial cause of serious prejudice only in respect of significant lost sales in the twin-aisle market and VLA market, and impedance of VLA in six geographic markets.

5.28. On 28 May 2018, the DSB adopted the Appellate Body report, together with the report of the compliance panel, as modified by the Appellate Body report.¹⁰⁵

5.3 The DS316 arbitration proceeding

5.29. On 13 July 2018, the United States requested that the DS316 arbitrator, which had originally been constituted on 13 January 2012, and whose work had been suspended in accordance with the terms of the parties' Sequencing Agreement, resume its work.¹⁰⁶

5.30. In its Decision, the DS316 arbitrator determined that, in accordance with its mandate under Article 7.10 of the SCM Agreement, it was appropriate to determine a maximum level of countermeasures that the United States could then impose annually, with reference to the value of the adverse effects determined to exist in the December 2011-2013 reference period used in the compliance proceedings.¹⁰⁷ Those adverse effects were: (a) three lost sales of twin-aisle LCA involving Cathay Pacific Airways, Singapore Airways, and United Airlines; (b) two lost sales of VLA involving Emirates and Transaero Airlines; and (c) impeded deliveries of VLA in Australia, China, the European Union, Korea, Singapore and the United Arab Emirates. More specifically, Airbus sold 10 A350XWB-1000s to Cathay Pacific, 30 A350XWB-900s to Singapore Airways, and 10 A350XWB-1000s to United Airlines. Airbus sold 50 A380s to Emirates and 4 A380s to Transaero. Airbus delivered a total of 47 A380s into the six geographic markets during the reference period. It should be noted that the A350XWB is Airbus' most advanced twin-aisle LCA family, and the A380 is the largest Airbus LCA.

5.31. The arbitrator determined that the value of these adverse effects was the total value of the LCA that Boeing would have sold and delivered had it won the five lost sales in the counterfactual, and the value of the additional VLA that Boeing would have delivered into the six geographic markets during the reference period in the counterfactual had Boeing not suffered impedance in those geographic markets. The first key technical step in this process was identifying which Boeing LCA models would have been sold and delivered in the counterfactual. The arbitrator determined this by identifying the closest competing Boeing model *vis-à-vis* each Airbus LCA model that was involved in the lost sales or delivered into the six geographic markets. With respect to the twin-aisle product

¹⁰⁴ Appellate Body Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, paras. 6.41-6.42.

¹⁰⁵ Appellate Body Report and Panel Report pursuant to Article 21.5 of the DSU, *Action by the Dispute Settlement Body*, WT/DS316/35.

¹⁰⁶ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, paras. 1.7-1.8. The Sequencing Agreement is referred to in para. 1.10 above.

¹⁰⁷ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.76.

market, the arbitrator identified these models as the Boeing 777-300ER and the 787-10 (*vis-à-vis* the A350XWB-1000 and A350XWB-900, respectively). With respect to the VLA product market, the arbitrator identified this model as the Boeing 747-8I (*vis-à-vis* the A380).¹⁰⁸

5.32. The next key technical step for the arbitrator was determining the number of 777-300ERs, 787-10s, and 747-8Is that Boeing would have sold to each airline in the counterfactual had it won the lost sales, and the number of additional 747-8Is that Boeing would have delivered into the six geographic markets during the reference period. Regarding the former number, the parties agreed, and the arbitrator accepted, that Boeing would have sold the same number of twin-aisle LCA to each of the five airlines in the counterfactual as Airbus actually sold to each airline in reality.¹⁰⁹ Determining the latter number required an additional determination. This was so because, in the view of the arbitrator, the compliance panel had not specified how many additional 747-8Is Boeing would have delivered into the six geographic markets in the counterfactual, only having found that the number of Boeing's deliveries would have been "higher" in the counterfactual.¹¹⁰ The parties thus contested how much "higher" Boeing's deliveries would have been. The arbitrator resolved this issue by conducting a detailed examination of the adopted findings in the dispute, and of the evidence and argumentation on the record before the arbitrator. That analysis led the arbitrator to conclude that it was reasonable to assume that Boeing would have delivered an additional number of 747-8Is into the six geographic markets equal to the number of A380s that Airbus actually delivered into those six geographic markets in the reference period (i.e. an additional 47 747-8Is).

5.33. In order to determine the counterfactual prices of the relevant Boeing LCA, the arbitrator relied on the prices of the relevant Boeing LCA models sourced from so-called "comparator orders", i.e. actual orders for those Boeing LCA models placed in sales campaigns deemed by the arbitrator to be sufficiently similar to the actual sales campaigns which underlay the lost sales and deliveries into the six geographic markets.¹¹¹

5.34. In sum, the DS316 arbitrator considered the value of "the adverse effects determined to exist" to be the sum of the values of: (a) 47 747-8Is that would have been delivered into the six geographic markets in the counterfactual; and (b) the 20 777-300ERs that Boeing would have sold to Cathay Pacific and United Airlines, 30 787-10s that Boeing would have sold to Singapore Airways, and a BCI number of 747-8Is that Boeing would have sold to Emirates.¹¹² The arbitrator determined the delivery prices of all such LCA and, after performing certain other technical adjustments, adjusted all such delivery prices into common 2013 US dollar terms. The arbitrator then divided that total 2013 dollar value by the number of months in the reference period and multiplied the resulting value by 12 to yield an annualized value of "the adverse effects determined to exist". That annualized value was USD 7,496.623 million.

¹⁰⁸ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, paras. 6.185-6.187. We note that the Boeing 777-300ER, the 787-10, and the 747-8I are relatively large and expensive LCA.

¹⁰⁹ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.221 (referring to Appellate Body Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, paras. 6.31(a) (noting that "the orders identified in Table 19 of the Panel Report in the twin-aisle LCA market represent 'significant lost sales' to the US LCA industry") and 6.37(a) (noting that "the orders identified in Table 19 of the Panel Report in the VLA market represent 'significant lost sales' to the US LCA industry")); and Panel Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, para. 6.1798 (noting that all of the orders identified in Table 19 of that report represent "significant" "lost sales" to the United States LCA industry and, therefore, that the challenged LA/MSF subsidies continue to be a "genuine and substantial" cause of serious prejudice to the United States within the meaning of Article 6.3(c) of the SCM Agreement).

¹¹⁰ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.366.

¹¹¹ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, section 6.3.4.3.6.1.

¹¹² The Transaero Airlines lost sale was valued at zero. This was so because Transaero had previously gone bankrupt and cancelled its four A380 orders from Airbus. The arbitrator considered that, in the counterfactual, Transaero also would have cancelled its counterfactual orders for 747-8Is. (Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.226).

6 THE UNITED STATES' OBJECTIONS TO THE LEVEL OF COUNTERMEASURES

6.1. In this part of the Decision, we address the United States' objections to the level of suspension of concessions or other obligations proposed by the European Union.¹¹³ We first provide an overview of the European Union's valuation methodology, before summarizing the United States' principal objections.¹¹⁴ We then set forth our general order of analysis and finally, undertake our assessment of the European Union's methodology.

6.1 Overview of the European Union's methodology

6.2. The European Union's methodology quantifies the level of countermeasures based on the value of adverse effects caused by:

- a. the Washington State B&O tax rate reduction operating through a price effects causal mechanism in the single-aisle LCA market, these adverse effects being (a) three significant lost sales that were found in the compliance proceedings to have occurred in the post-implementation period¹¹⁵, and (b) threat of impedance of imports to the United States geographic market and exports to the UAE geographic market, that was found in the compliance proceedings to have occurred in the post-implementation period¹¹⁶; and
- b. the pre-2007 aeronautics R&D subsidies operating through a technology effects causal mechanism in the twin-aisle LCA market, these adverse effects being significant lost sales of the A330 and Original A350 that the original panel had found in the original proceedings to exist in the 2004-2006 reference period.¹¹⁷

6.3. The European Union notes that all of these adverse effects derive from findings that the subsidies in question caused Airbus to lose certain LCA sales campaigns, and therefore proposes to value the adverse effects by quantifying the value to Airbus of each of these underlying lost sales.¹¹⁸ Accordingly, the European Union proposes that the Arbitrator calculate the values of the lost sales and assign those values to the applicable reference period. For the adverse effects pertaining to the Washington State B&O tax rate reduction in the compliance proceedings (the post-implementation Washington State B&O Tax Rate Reduction Adverse Effects), the European Union proposes that the reference period is the 33-month period from January 2013 until September 2015. For the adverse effects pertaining to the pre-2007 aeronautics R&D subsidies found in the original proceeding (the 2004-2006 R&D Adverse Effects), the European Union proposes that the reference period is the 36-month period from 2004-2006.¹¹⁹

6.4. For each of the post-implementation B&O Tax Rate Reduction Adverse Effects and the 2004-2006 R&D Adverse Effects, the European Union (a) expresses the values of the lost sales on a common basis (2015 US dollars), (b) sums them together, and (c) annualizes their respective total

¹¹³ See para. 1.21 above.

¹¹⁴ The European Union's proposed methodology for determining the level of countermeasures is set forth initially in its methodology paper. The European Union subsequently revised aspects of its methodology in response to the United States' written submission and in the light of the issuance of the decision of the DS316 arbitrator. The European Union submitted its methodology paper on 25 July 2019, the United States submitted its written submission on 12 September 2019, and the DS316 arbitrator issued its decision on 2 October 2019.

¹¹⁵ The three significant lost sales were the 2013 Icelandair, 2013 Air Canada, and 2014 Fly Dubai lost sales.

¹¹⁶ The threat of impedance finding in the US geographic market was based on an intermediate finding of a 2011 Delta Airlines lost sale, and in the UAE geographic market, on an intermediate finding of the 2008 and 2014 Fly Dubai lost sales. The European Union indicated that the 2014 Fly Dubai lost sale is already included in its valuation of adverse effects as a significant lost sale and would not be valued again as part of the threat of impedance valuation. (European Union's written submission, para. 283; and response to Arbitrator question No. 31, para. 131)

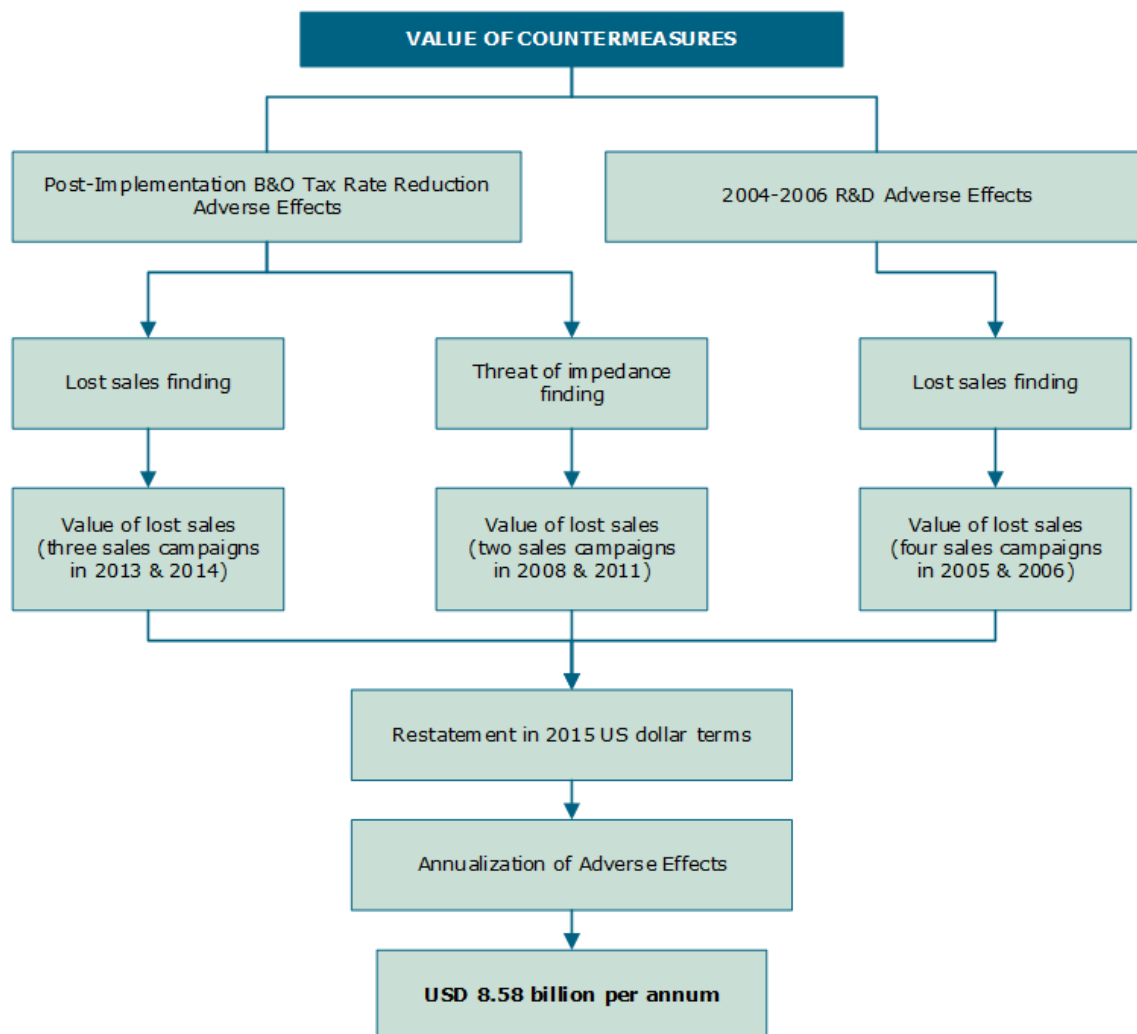
¹¹⁷ These significant lost sales involve four sales campaigns in 2005 in which the 787 was selected over the A330 and Original A350 during the 2004-2006 original reference period (Qantas Airways, Ethiopian Airlines, Icelandair, and Kenya Airways). (European Union's methodology paper, para. 177)

¹¹⁸ We present here the European Union's primary proposed methodology for valuing the threat of impedance findings that are part of the post-implementation B&O Tax Rate Reduction Adverse Effects. For the presentation and discussion of the other proposed methodologies, see section 6.4.5.3.2 below.

¹¹⁹ European Union's methodology paper, paras. 78, 83, 175, and 181; written submission, paras. 391, 396, and 403; and response to Arbitrator question No. 66, paras. 269-270.

values. It then adds the two annualized total values together to arrive at an aggregated annualized level of countermeasures that it seeks authorization to impose for every year going forward, until the authority to impose countermeasures ends under the terms of Article 22.8 of the DSU. In other words, the European Union proposes a single, maximum level of countermeasures that it is authorized to impose annually. The level of countermeasures would reflect the annualized value of adverse effects that were determined to exist in past reference periods (i.e. 2013-2015 for the post-implementation Washington State B&O Tax Rate Reduction Adverse Effects, and 2004-2006 for the 2004-2006 R&D Adverse Effects). For ease of reference, we refer to this structure of countermeasures as "Annual Suspension". The overall structure of the European Union's methodology can be illustrated as follows:

Figure 1: Overall structure of European Union's methodology



6.5. As for the determination of the value of the lost sales underlying the post-implementation B&O Tax Rate Reduction Adverse Effects and the 2004-2006 R&D Adverse Effects, the various steps in the European Union's methodology can be generally summarized as follows. For each of the relevant lost sales, the European Union:

- a. assumes a counterfactual scenario in which Airbus would have received LCA orders for the same number of Boeing LCA that were actually ordered from Boeing in those sales campaigns (including options, where applicable) and that Airbus would have delivered the LCA according to the same delivery schedule as the actual Boeing deliveries;

- b. for cancellations that occurred prior to 2020, adjusts the counterfactual delivery numbers downward to account for such cancellations;
- c. determines a delivery-date price¹²⁰ for each counterfactual Airbus order not affected by pre-2020 cancellations (by applying the contractual escalation factors from the Airbus final offers in each sales campaign to the Net Fly-Away Price expressed in the Airbus final offer), then adjusts that price by a survival rate to reflect the risk of future cancellation of deliveries;
- d. discounts the adjusted delivery-date prices back to the date at which the lost sale occurred (using Airbus' cost of debt as the discount factor) to determine the value of each LCA order at the time of the order; and
- e. performs a temporal adjustment to restate all of the order-date values on a common 2015 US dollar basis using the Airbus LCA Inflation Index (ALII)¹²¹, 2015 being the last year of the compliance panel's reference period, to arrive at a value for each lost sale (in 2015 US dollars).

6.6. Once the 2015 US dollar values of each lost sale are obtained, the European Union:

- a. calculates total values for each of the post-implementation B&O Tax Rate Reduction Adverse Effects and 2004-2006 R&D Adverse Effects by aggregating the values of the lost sales relevant to each.
- b. divides the values of post-implementation B&O Tax Rate Reduction Adverse Effects and 2004-2006 R&D Adverse Effects by the number of months in the applicable annualization period, and multiplies those amounts by 12, to arrive at annualized values of the post-implementation B&O Tax Rate Reduction Adverse Effects and 2004-2006 R&D Adverse Effects¹²²; and
- c. sums the annualized values of post-implementation B&O Tax Rate Reduction Adverse Effects and 2004-2006 R&D Adverse Effects and determines the level of Annual Suspension (USD 8,581,019,068).¹²³

¹²⁰ We use in some places the term "date" rather than "year" when referring to components of the parties' and Arbitrator's methodology since certain of the underlying calculations are specific to a given month and are therefore not applied to a given year as a whole.

¹²¹ The European Union states that it compiled the ALII based on Airbus' standard contractual price escalation formulae, and argues that the ALII accordingly reflects [***] changes in labour and material costs resulting from inflation and other economic changes over time. (European Union's methodology paper, para. 101; and written submission, para. 396, sixth bullet)

¹²² For the post-implementation B&O Tax Rate Reduction Adverse Effects, the values of (a) the three significant lost sales found to exist in the compliance panel's reference period and (b) the two lost sales underlying the threat of impedance findings in the reference period (which lost sales occurred prior to the expiration of the implementation period) are added together, divided by the 33-month period that the European Union asserts was the compliance panel's reference period, and multiplied by 12 (i.e. the number of months in a year). As discussed further in section 6.4.5.3 below, the European Union has proposed a number of valuation methodologies for the threat of impedance findings. The methodology described here is the methodology it proposed in its written submission. For the 2004-2006 R&D Adverse Effects, the values of the four significant lost sales are divided by the 36-month period that was the original panel's reference period and multiplied by 12.

¹²³ European Union's written submission, paras. 407-408. Over the course of the proceeding, the European Union presented alternate methods of calculating the annual level of adverse effects, which have given rise to different proposed levels of Annual Suspension. (See e.g. European Union's response to question No. 10; Valuation of lost sales in the single-aisle market based on delivery numbers contained in Airbus' final offers (Exhibit EU-62 (HSBI)); Valuation of lost sales in the twin-aisle market based on delivery numbers contained in Airbus' final offers (Exhibit EU-63 (HSBI)); 2RPQ valuation of single-aisle lost sales – Airbus delivery schedules (Exhibit EU-85 (HSBI)); 2RPQ valuation of single-aisle threat of impedance – Airbus delivery schedules (Exhibit EU-77 (HSBI)); 2RPQ valuation of twin-aisle lost sales – Airbus delivery schedules (Exhibit EU-87 (HSBI)); 2RPQ valuation of single-aisle threat of impedance – Boeing delivery schedules (Exhibit EU-76 (HSBI)); 2RPQ valuation of single-aisle lost sales – Boeing delivery schedules (Exhibit EU-84 (HSBI)); and 2RPQ valuation of twin-aisle lost sales – Boeing delivery schedules (Exhibit EU-86 (HSBI))). The merits of the alternative proposed valuation methodologies are discussed later in this Decision. See section 6.4 below.

6.7. The European Union had initially proposed that the amount of Annual Suspension be adjusted for inflation and expressed in US dollar values as of April 2020 and that countermeasures for each year subsequent to 2020 be adjusted annually for inflation. However, the European Union subsequently indicated that, in light of the fact that the DS316 arbitrator rejected the United States' request to make analogous inflation adjustments to the countermeasures that the United States was authorized to impose from that proceeding, and in the interests of ensuring even-handedness between the two proceedings, it no longer proposes these inflation adjustments.¹²⁴

6.2 The United States' response

6.8. The United States does not object to countermeasures in the form of Annual Suspension at a level that reflects the annualized value of adverse effects determined to exist in a past reference period. However, the United States argues that the Arbitrator cannot value the 2004-2006 R&D Adverse Effects because they are not within the scope of the phrase "the adverse effects determined to exist" for purposes of Article 7.10 in the circumstances of this proceeding.

6.9. As for the valuation of the post-implementation B&O Tax Rate Reduction Adverse Effects, the United States argues that the compliance panel's reference period was the 36-month period of September 2012-September 2015 and not the 33-month period of January 2013 to September 2015 as asserted by the European Union. The United States does not object to the European Union valuing the adverse effects in the form of the threat of impedance on the basis of the underlying lost sales, and proposes itself that the post-compliance B&O Tax Rate Reduction Adverse Effects all be valued as lost sales. However, the United States argues that when the total values of the five lost sales are annualized, the denominator must reflect the fact that two of the five lost sales occurred prior to the expiration of the implementation period (2008 and 2011, respectively), and thus proposes that the annualization calculation reflect this longer period of 2007-2015 over which the lost sales occurred.¹²⁵

6.10. The United States also makes a number of objections to more technical aspects of the valuations of the five lost sales related to the post-implementation B&O Tax Rate Reduction Adverse Effects. First and foremost, it challenges the European Union's assumption that, in the counterfactual, Airbus would have won each of the sales campaigns. According to the United States, the causation findings from the compliance proceedings do not establish that, absent the Washington State B&O tax rate reduction, Airbus would have won each of the sales campaigns. The United States therefore proposes that the value of each of the lost sales include a probabilistic adjustment to account for the uncertainty of Airbus actually winning each of the sales campaigns in the counterfactual.

6.11. Also related to the number of Airbus LCA that should be valued as part of each of the underlying lost sales, the United States objects to the European Union's proposal that the Arbitrator should include the value of certain LCA options contained in the Airbus final offers or Boeing purchase agreements, mainly on the basis that to do so would be contrary to the findings of the compliance panel, which distinguished firm orders from options. Moreover, the United States considers that the counterfactual order numbers should be based on the number of firm orders for Airbus LCA that Airbus proposed in its final offers to customers, rather than the actual number of orders obtained by Boeing in its purchase agreements, and that the counterfactual delivery schedules for the Airbus LCA should correspond to the delivery schedules in the Airbus final offers. With respect to the reflection of the actual and potential cancellation of LCA orders in the counterfactual, the United States proposes the application of estimated "survival rates" that differ in various respects from the survival rate estimates proposed by the European Union.

6.12. The United States agrees generally with the European Union's proposal to value the lost sales according to the value of that lost sale at the time of order, by calculating the delivery-date values

¹²⁴ European Union's response to Arbitrator question No. 40, para. 159 and fn 165 thereto. See also section 6.5.1 below.

¹²⁵ United States' written submission, paras. 103-106. The United States explains that, since the compliance panel examined all of the evidence concerning sales campaigns from the end of the 2004-2006 reference period in the original proceeding until the evidentiary cut-off for the compliance proceedings (September 2015), the valuation of the five lost sales should be annualized over a period beginning in 2007 rather than in 2008, which is the date of the first lost sale. (United States' written submission, para. 101 (referring to Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 9.381))

for the LCA in accordance with the contractual escalation formulae in Airbus' final offers, discounting those values back to the time of the relevant order and then adjusting those values forward in time so that they are expressed on a common 2015 US dollar basis. However, the United States objects to the inclusion of a particular cost item in the Airbus LCA prices used for these calculations (i.e. [[**]]) on the basis that this item, while part of Airbus' Net Fly-Away Price, is not reflected in Airbus' revenues, and therefore should not be part of the valuation of adverse effects. It also proposes that the Arbitrator use Airbus' Weighted Average Cost of Capital (WACC) as the appropriate index for discounting the delivery-date prices back to their values at the date of order.

6.13. The United States proposes that, after correcting for the alleged errors in the European Union's methodology, and taking into account recent data regarding some of these adverse effects, the level of countermeasures that the European Union can be authorized to impose cannot exceed USD 411.8 million.¹²⁶

6.3 Order of analysis

6.14. Based on the European Union's proposed methodology and the United States' objections, we structure our assessment in the following manner:

- a. we first address whether the "adverse effects determined to exist" in this proceeding include the 2004-2006 R&D Adverse Effects (in section 6.4.1);
- b. we then address issues regarding the overall structure of the countermeasures in respect of the post-implementation B&O Tax Rate Reduction Adverse Effects. The first issue concerns the appropriateness of determining the maximum level of countermeasures in the form of Annual Suspension based on the value of the post-implementation B&O Tax Rate Reduction Adverse Effects determined to exist in the compliance panel's reference period (section 6.4.2). We also address the disputed issue of what the beginning and end dates of the compliance panel's reference period were (section 6.4.3), and issues regarding our consideration of events occurring after the reference period (section 6.4.4);
- c. we next address conceptual issues regarding the European Union's methodologies concerning significant lost sales and threat of impedance. More specifically, we consider whether the general approaches proposed by the European Union to valuing these adverse effects are acceptable in the light of the nature of those adverse effects (section 6.4.5);
- d. we then address technical valuation issues that are common to the valuations of both forms of adverse effects, i.e. lost sales and threat of impedance (section 6.4.6), and then remaining technical issues specific to valuing significant lost sales (section 6.4.7) and threat of impedance (section 6.4.8);
- e. in the light of all the previous decisions made up to this point, we then summarize the technical methodology that we will follow to value significant lost sales and threat of impedance (section 6.4.9);
- f. in section 6.5 we present our valuation of the aggregated annualized value of the adverse effects; and
- g. in section 7 we make some observations concerning the United States' claim regarding cross-retaliation in accordance with Article 22.3 of the DSU before setting forth our conclusions in section 8.

¹²⁶ United States' written submission, para. 174; and Corrected Annualized Value of the Adverse Effects in 2014 and March 2019 Dollars (Exhibit USA-25 (HSBI)). Over the course of the proceeding, the United States subsequently revised its calculation of the Annual Suspension that could be authorized for various reasons. (See United States' response to Arbitrator question No. 33, paras. 97-106; Corrected Annualized Value of the Adverse Effects in July 2015 Dollars (Exhibit USA-44 (HSBI))); United States' response to Arbitrator question Nos. 57, 66 and 85; Annualized Value of the Adverse Effects in 2015 Dollars (Revised) (Exhibit USA-60 (HSBI))); United States' comments on the European Union's response to Arbitrator question No. 85, para. 214; and Annualized Value of the Adverse Effects in 2015 Dollars (Revised) (Exhibit USA-105 (HSBI)).

6.4 Assessment of the European Union's methodology

6.4.1 Valuation of the 2004-2006 R&D Adverse Effects as part of the "adverse effects determined to exist" within the scope of this proceeding

6.15. The European Union argues that the Arbitrator must value certain of the adverse effects that the original panel and Appellate Body determined were caused by the pre-2007 aeronautics R&D subsidies in the reference period used in the original proceeding, i.e. 2004-2006 (the 2004-2006 R&D Adverse Effects).¹²⁷ According to the European Union, this is so because the 2004-2006 R&D Adverse Effects are among "the adverse effects determined to exist" within the meaning of Article 7.10 of the SCM Agreement in the circumstances of this proceeding. The European Union maintains that the "trigger condition" governing its right to impose countermeasures relative to the 2004-2006 R&D Adverse Effects is found in Article 7.9 of the SCM Agreement, which begins with the phrase: "In the event the Member has not {complied} within six months ...".¹²⁸ The European Union argues that this "trigger condition" in Article 7.9 has been satisfied in three different ways, each individually allowing the Arbitrator to value the 2004-2006 R&D Adverse Effects.¹²⁹

6.16. First and foremost, the European Union argues that the trigger condition has been satisfied "by virtue of the Appellate Body's *reversal* of the compliance panel's finding that the United States achieved compliance in relation to pre-2007 aeronautics R&D subsidies, leaving operative the multilateral DSB recommendations to comply flowing from the original proceedings".¹³⁰ More specifically, the European Union notes that this reversal means that the DSB's recommendations and rulings as a result of the original proceeding (i.e. that the United States acted inconsistently with its obligations under Article 5 and 6.3 of the SCM Agreement with respect to the pre-2007 aeronautics R&D subsidies, and that the United States should bring itself into compliance with such obligations) are still operative. In the European Union's view, therefore, "absent a 'multilaterally confirmed' finding of compliance, the default position is not compliance, but that which is expressed by the recommendation of the Members sitting collectively as the DSB, i.e., non-compliance".¹³¹ The European Union asserts that the United States cannot overcome this "default position" of non-compliance by unilaterally claiming compliance, as this would be contrary to the DSU's preference for multilateral over unilateral action by Members and the object and purpose of countermeasures which is to induce a respondent's compliance. Rather, according to the European Union, the United States must obtain a "multilateral finding of compliance"¹³², and "{u}ntil that day, the dispute settlement mechanism has not achieved 'a positive solution to {the} dispute', under Article 3.7 of the DSU, and there remains a 'valid rationale' for requesting and authorising countermeasures".¹³³

¹²⁷ The adverse effects that the European Union asks the Arbitrator to value in this context are certain lost sales under Article 6.3(c) of the SCM Agreement that occurred in the 200-300 seat LCA product market (specifically relating to sales involving the Boeing 787). (See European Union's methodology paper, paras. 177-213; and Valuation of twin-aisle LCA lost sales (Exhibit EU-25 (HSBI)))

¹²⁸ European Union's comments on the United States' response to Arbitrator question No. 43, para. 17. The European Union has also asserted, however, that this language simply means "that, normally, one would expect the retaliation request to be made and the arbitrat{or} to be convened after the six-month implementation period". (European Union's response to Arbitrator question No. 44, para. 47) The European Union also asserts that the term "nature" in Articles 7.9 and 7.10 "invites a consideration of the *specific* type of 'adverse effects' that have been determined to exist as a result of the *specific* measure in relation to which countermeasures are being requested". (European Union's response to Arbitrator question No. 43, para. 35 (quoting Decision by the Arbitrator, *US – Upland Cotton (Articles 22.6 – US II)*, para. 4.43) (emphasis added by the European Union))

¹²⁹ The European Union "disagrees that, under Article 7.9 of the SCM Agreement, the basis for authorization of countermeasures is a failure to comply after the end of the" compliance deadline. (European Union's response to Arbitrator question No. 44, para. 42)

¹³⁰ European Union's comments on the United States' response to Arbitrator question No. 43, para. 18. (emphasis original)

¹³¹ European Union's response to Arbitrator question No. 42, para. 7. (fn and emphasis omitted) See also European Union's response to Arbitrator question No. 44; and comments on the United States' response to Arbitrator question No. 45, para. 67 ("It follows that *multilateral* DSB recommendations 'remain operative ... until the 'problem' is entirely 'fixed'"') (quoting Panel Report, *US – FSC (Article 21.5 – EC II)*, para. 7.36) (emphasis original))

¹³² European Union's response to Arbitrator question No. 42, para. 10. (emphasis omitted)

¹³³ European Union's response to Arbitrator question No. 42, para. 10 (quoting Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.52). See also

6.17. The European Union emphasizes in this context that Article 7.9 "does not require a finding of non-compliance with respect to a reference period after the end of the implementation period"¹³⁴, and therefore "the adverse effects determined to exist" do not necessarily have to be those identified in a temporal period following the implementation period. This is so, in the European Union's view, because the phrase "adverse effects determined to exist" in Article 7.9 is "not grammatically linked" to the "trigger condition" language, and, relatedly, neither Article 7.9 nor 7.10 indicate that "the adverse effects determined to exist" must be adverse effects determined to exist in a compliance proceeding to the exclusion of those determined to exist in an original proceeding. The European Union supports this line of reasoning further by asserting that, in an instance where the parties agree that no compliance has occurred following an original proceeding, the adverse effects identified in the original proceeding might be the only "adverse effects determined to exist" before an arbitrator. The European Union therefore argues that there would be "serious systemic consequences" if Articles 7.9 and 7.10 were to be interpreted as requiring an affirmative finding of non-compliance in the post-implementation period in a compliance proceeding as a prerequisite for authorising countermeasures. Notably, the European Union argues that such an interpretation would diminish the rights and obligations provided for in the covered agreements, which would be contrary to Article 3.2 of the DSU.¹³⁵

6.18. The European Union argues that relevant provisions of the DSU provide contextual support for its position as set out above. In particular, the European Union notes that: (a) under the "normal and timely operation of the relevant dispute settlement provisions", "it is not {at} all problematic ... that the countermeasures should be considered commensurate also, where appropriate, as here, with the adverse effects determined to exist by the original adjudicators"¹³⁶; and (b) Article 22.6 of the DSU provides that arbitrations be carried out by the "original panel", not the compliance panel.¹³⁷

6.19. The second way in which the European Union argues that the "trigger condition" in Article 7.9 has been satisfied is that "the European Union has established non-compliance *in the compliance proceedings* with respect to the B&O tax rate reduction".¹³⁸ It argues that "{s}pecifically, the European Union successfully demonstrated that ... the United States continues to provide WTO-inconsistent subsidies to Boeing that cause adverse effects to EU interests {and} that the B&O tax rate reduction causes adverse effects to the European Union".¹³⁹ In effect, the European Union appears to argue that the adopted finding in the compliance proceedings that the United States failed to comply with respect to the *Washington State B&O subsidy* means that the "trigger condition" in Article 7.9 should be deemed satisfied with respect to the *pre-2007 aeronautics R&D subsidies* as well.

6.20. Third, and finally, the European Union broaches the possibility that the "trigger condition" in Article 7.9 has been satisfied because "the European Union has established non-compliance *in these arbitration panel proceedings* with respect to the pre-2007 aeronautics R&D subsidies".¹⁴⁰ However, "the European Union considers that the Arbitrat{or} should not go down th{e} path of making its own adverse effects determination".¹⁴¹ The European Union emphasizes that "Article 7.10 of the SCM Agreement does not direct an {arbitrator} to make a *de novo* determination of the existence

European Union's methodology paper, para. 174; written submission, paras. 292-344; response to Arbitrator question No. 2, paras. 6-9, 11, and 16; No. 42, paras. 7-9; No. 43, paras. 36-39; No. 44; and No. 46; and comments on the United States' response to Arbitrator question No. 43, paras. 25-27; No. 44, paras. 50-51; and No. 45, para. 66.

¹³⁴ European Union's comments on the United States' response to Arbitrator question No. 44, para. 31. See also European Union's comments on the United States' response to Arbitrator question No. 44, para. 33.

¹³⁵ European Union's response to Arbitrator question No. 42, paras. 6 and 11. See also European Union's comments on the United States' responses to Arbitrator question Nos. 42 and 43. The European Union further states that WTO Members agree that the covered agreements do not expressly address this "sequencing issue" surrounding compliance proceedings and arbitration proceedings. (European Union's response to Arbitrator question No. 42, para. 18)

¹³⁶ European Union's response to Arbitrator question No. 42, para. 19.

¹³⁷ European Union's response to Arbitrator question No. 42, para. 20.

¹³⁸ European Union's comments on the United States' response to Arbitrator question No. 43, para. 19. (emphasis original)

¹³⁹ European Union's comments on the United States' response to Arbitrator question No. 44, paras. 40-42.

¹⁴⁰ European Union's comments on the United States' response to Arbitrator question No. 43, para. 19. (emphasis original)

¹⁴¹ European Union's written submission, para. 357.

of adverse effects".¹⁴² Further, in the European Union's view, "{d}oing so would improperly conflate the role of the {arbitrator} with that of a compliance panel"¹⁴³ because if there is "a disagreement between the parties as to {the} compliance status of the respondent, that is a matter to be addressed under Article 21.5 of the DSU, before a different adjudicator".¹⁴⁴ The European Union also stresses that if the Arbitrator were to address this compliance issue, the Arbitrator must "respect{} its duty, under Article 22.6 of the DSU, to complete this arbitration on an expedited basis".¹⁴⁵ In sum, "it is not the European Union's position that, in the procedural circumstances of this case, the Arbitrat{or} is mandated, or even entitled, to make a determination of *whether* the pre-2007 aeronautics R&D subsidies cause adverse effects";¹⁴⁶ and even if the Arbitrator were to address this question, the European Union maintains that the Arbitrator's work should not delay the proceeding.¹⁴⁷

6.21. Notwithstanding this argument, the European Union asserts that it provided evidence with its written submission demonstrating that the pre-2007 aeronautics R&D subsidies continue to cause adverse effects after the end of the implementation period.¹⁴⁸ According to the European Union, if the Arbitrator "decides that, to meet the trigger of Article 7.9, a finding of non-compliance *after* the end of the implementation period *in relation to the pre-2007 R&D aeronautics subsidies* is a prerequisite", it must conclude that such prerequisite has been met. This, the European Union argues, is because the United States has failed to engage with, or rebut, that evidence, and the Arbitrator must therefore find that the European Union has demonstrated the United States' non-compliance with respect to the pre-2007 aeronautics R&D subsidies in the post-implementation period.¹⁴⁹ If the Arbitrator did not so find, the European Union argues that the Arbitrator would be "making the case" for the United States. This is especially so, according to the European Union, because it would be the United States' burden in this proceeding to demonstrate that the pre-2007 aeronautics R&D subsidies no longer cause adverse effects in the post-implementation period, and the United States has failed in carrying that burden.¹⁵⁰

6.22. The United States argues that the Arbitrator cannot value the 2004-2006 R&D Adverse Effects because they are not within the scope of the phrase "the adverse effects determined to exist" for purposes of Article 7.10 in the circumstances of this proceeding. The United States asserts that the phrase "the adverse effects determined to exist" has the same meaning in both Articles 7.9 and 7.10. This is because the procedural purpose of an arbitration conducted under Article 7.10 is to advise the DSB as to what countermeasures, commensurate with "the adverse effects determined to exist", the DSB may authorize under Article 7.9. The United States emphasizes the requirement in Article 7.9 of the SCM Agreement that the DSB shall grant authorization to take countermeasures "in the event the Member has not taken appropriate steps to remove the adverse effects or withdraw the subsidy". It argues that this creates a condition requiring that before the countermeasures with respect to a particular subsidy be authorized, it must be established that the responding party neither took appropriate steps to remove the adverse effects caused by that subsidy nor withdrew the subsidy. It further argues that this condition has not been established *vis-à-vis* the pre-2007 aeronautics R&D subsidies.¹⁵¹

6.23. The United States argues that, with respect to a particular subsidy, the trigger condition created in Article 7.9 could be established in one of three ways. First, the United States asserts that

¹⁴² European Union's response to Arbitrator question No. 2, para. 6.

¹⁴³ European Union's response to Arbitrator question No. 4, para. 28.

¹⁴⁴ European Union's response to Arbitrator question No. 4, para. 29.

¹⁴⁵ European Union's written submission, para. 356. (internal quotation marks and citation omitted)

¹⁴⁶ European Union's response to Arbitrator question No. 5, para. 32. (emphasis original)

¹⁴⁷ See e.g. European Union's opening statement at the meeting of the Arbitrator with the parties, para. 137.

¹⁴⁸ The European Union refiled its submissions from the compliance panel proceedings as exhibits to its written submission, which it argues "provides evidence and argument left unaddressed in these proceedings by the United States concerning the continued serious prejudice caused by the pre-2007 aeronautics R&D subsidies during the post-implementation period through a technology effects causal mechanism". (European Union's written submission, para. 358)

¹⁴⁹ European Union's comments on the United States' response to Arbitrator question No. 44, para. 50(c).

¹⁵⁰ See European Union's comments on the United States' response to Arbitrator question No. 44, paras. 41-51.

¹⁵¹ United States' comments on the European Union's response to Arbitrator question No. 42, para. 3. See also United States' response to Arbitrator question No. 43; No. 44, para. 11; and No. 45; and comments on the European Union's response to Arbitrator question No. 42.

the parties may agree that the respondent has not complied with the recommendations and rulings of the DSB, which the United States notes is not the case here. Second, the United States asserts that an arbitrator established under Article 22.6 of the DSU might be able to address compliance issues. In the United States' view, however, the ability of an arbitrator to do this is debated among Members. Further, the United States asserts that the European Union has explained that it is not pursuing this option, has offered insufficient evidence to support a showing of non-compliance in this arbitration proceeding and, to the extent that it has offered such evidence, it has done so at an inappropriate time. The United States also argues that the European Union's pursuit of this option would be inappropriate in the light of the parties' Sequencing Agreement. Third, and finally, the United States asserts that a compliance panel can establish the respondent's non-compliance after the end of the implementation period. The United States notes that this has not occurred with respect to the pre-2007 aeronautics R&D subsidies, and stresses in this context that it was the European Union's burden in the compliance proceedings to demonstrate the United States' continued non-compliance in the post-implementation period, a burden that the European Union failed to carry. In the light of the first two options discussed in this paragraph, the United States emphasizes that it does not therefore argue that "the adverse effects determined to exist" may only be those identified in a compliance proceeding, as the European Union claims.¹⁵²

6.24. The United States emphasizes that findings in an original proceeding that a particular subsidy is inconsistent with Articles 5 and 6 of the SCM Agreement cannot alone satisfy the trigger condition in Article 7.9 with respect to that subsidy, as the European Union argues. This is so, in the United States' view, because an original panel cannot by definition establish a respondent's non-compliance after the implementation period that follows the original panel's report. The United States therefore argues that, insofar as the European Union relies on the findings of inconsistency with Articles 5 and 6 of the SCM Agreement in the original proceedings to satisfy the trigger condition in Article 7.9, the European Union effectively asks the Arbitrator to find that the 2004-2006 R&D Adverse Effects continue to exist in the post-implementation period. The United States notes that the European Union attempted, but failed, to prove that proposition in the compliance proceedings. Moreover, in the United States' view, adopting such an assumption would be incongruous because key market conditions changed between the 2004-2006 reference period and the post-implementation period.¹⁵³

6.25. The United States also: (a) asserts that the Sequencing Agreement between the parties demonstrates that the European Union shared the United States' proffered interpretation of Articles 7.9 and 7.10 until this arbitration proceeding was initiated; (b) dismisses the European Union's arguments related to contextual aspects of the DSU because such considerations in no way remove the trigger condition in Article 7.9; and (c) argues that the European Union miscasts passages from prior arbitration decisions and panel reports in its arguments.¹⁵⁴

6.26. In response to certain of the United States' arguments, the European Union: (a) clarifies that its position is not that the 2004-2006 R&D Adverse Effects continue to exist in the post-implementation period, but, rather, that the Arbitrator should value the 2004-2006 R&D Adverse Effects even in the absence of an affirmative finding of non-compliance in the post-implementation period; (b) states that the Sequencing Agreement between the parties cannot be interpreted as indicating that the European Union has waived any of its relevant rights under the DSU or SCM Agreement; and (c) rejects the United States' apparent suggestion that the allocation of the burden of proof in a compliance proceeding is a meaningful consideration in this context.¹⁵⁵

¹⁵² United States' written submission, paras. 53-54 and 69-81; response to Arbitrator question No. 2, paras. 7 and 9; No. 4; and No. 44; and comments on the European Union's response to Arbitrator question No. 42, paras. 8 and 9; and No. 43, para. 18. The United States also asserts that the allocation of the burden of proof in compliance proceedings "could affect the nature of those findings and a subsequent adjudicator's understanding of them" and in particular "whether the compliance report{s} establish non-compliance in the post-implementation period". (United States' response to Arbitrator question No. 47, para. 30 (emphasis omitted)). See also United States' written submission, para. 70)

¹⁵³ United States' response to Arbitrator question No. 2, paras. 9 and 14; No. 41; No. 44, paras. 18-20; and No. 45.

¹⁵⁴ United States' response to Arbitrator question No. 45, para. 28; and comments on the European Union's response to Arbitrator question No. 42.

¹⁵⁵ European Union's response to Arbitrator question No. 42, para. 25; and comments on the United States' response to Arbitrator question No. 41, paras. 1-2; No. 45, paras. 68-69; and No. 47.

6.27. The Arbitrator recalls that, at the end of the compliance proceedings, the Appellate Body reversed the compliance panel's findings that the European Union had failed to establish that the pre-2007 aeronautics R&D subsidies still caused adverse effects after the end of the implementation period. However, the Appellate Body was unable to complete the analysis as to whether there remained acceleration effects of the pre-2007 aeronautics R&D subsidies in the post-implementation period.¹⁵⁶ Thus, at this time, there are no findings adopted by the DSB as to whether the pre-2007 aeronautics R&D subsidies cause adverse effects in the post-implementation period. Relatedly, there are also no DSB-adopted findings as to whether the United States brought the pre-2007 aeronautics R&D subsidies into compliance with the recommendations and rulings of the DSB issued as a result of the original proceeding by the end of the implementation period.¹⁵⁷

6.28. That being said, in our view, the parties' arguments raise two key issues:

- a. *first*, whether Article 7.9 creates a condition that "the adverse effects determined to exist" within the meaning of Article 7.10 must be those caused in the post-implementation period by a subsidy with respect to which an original respondent has failed to comply with previously issued recommendations and rulings of the DSB. Understanding the relationship between Article 7.9 and Article 7.10 is critical for determining what, if any, scope the Arbitrator has within its mandate to value the 2004-2006 R&D Adverse Effects because, as the European Union argues, Article 7.10, which establishes the Arbitrator's mandate, places no explicit limitations on the scope of what may comprise "the adverse effects determined to exist"; and
- b. *second*, if Article 7.9 does create the condition referenced in paragraph (a) above (i.e. that "the adverse effects determined to exist" are those caused in the post-implementation period by a subsidy that the respondent has not brought into compliance), whether the presence of the 2004-2006 R&D Adverse Effects can serve to establish adverse effects in the *post-implementation period* caused by a subsidy with respect to which a respondent has failed to comply with the recommendations and rulings of the DSB.

6.29. We address each in turn.

6.4.1.1 Whether "the adverse effects determined to exist" must be those caused in the post-implementation period by a subsidy with respect to which an original respondent has failed to comply with previously issued DSB recommendations and rulings

6.30. Article 7.10 of the SCM Agreement contains the Arbitrator's mandate:

In the event that a party to the dispute requests arbitration under paragraph 6 of Article 22 of the DSU, the arbitrator shall determine whether the countermeasures are commensurate with the degree and nature of the adverse effects determined to exist.

6.31. Article 7.10 does not specify whether "the adverse effects determined to exist" must be those caused in the post-implementation period by a subsidy with respect to which the respondent has failed to comply with previously issued recommendations and rulings of the DSB. However, we note that the term "countermeasures" has been (in our view, instructively) interpreted by both previous arbitrators operating under Article 7.10 as referring to "measures taken to 'counteract' something, and specifically ... measures taken to act against, or in response to, *a failure to remove the adverse effects of, or withdraw, an actionable subsidy within the required time period*".¹⁵⁸ This appears a reasonable interpretation in the light of the purpose of countermeasures, which is to induce a respondent's compliance.¹⁵⁹ Thus, the nature of countermeasures suggests that countermeasures should only be determined and applied *vis-à-vis* a subsidy with respect to which the respondent has

¹⁵⁶ See para. 1.17 above; and Appellate Body Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), paras. 5.416, 5.420-5.421, 5.443, and 6.11.

¹⁵⁷ See paras. 1.16-1.17 above (explaining these findings).

¹⁵⁸ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 5.2 (citing *US – Upland Cotton (Article 22.6 – US II)*, para. 4.26). (emphasis added)

¹⁵⁹ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 5.2 ("Arbitrators have further observed that the purpose of authorized countermeasures and suspension of concessions or other obligations is to induce a responding party's compliance.").

failed to comply by the end of the implementation period, i.e. a subsidy that has not been withdrawn and still causes adverse effects in the post-implementation period.

6.32. We next consider the context of Article 7.10. Article 7.10 is the last paragraph of Article 7 of the SCM Agreement, addressing "Remedies" for actionable subsidies. The paragraphs of Article 7 provide for a general sequence of events during a dispute. As such, these paragraphs are interconnected just as the stages of a dispute are interconnected.¹⁶⁰ We therefore specifically note Article 7.9, which provides the most immediate context for interpretation of Article 7.10. It provides:

In the event the Member has not taken appropriate steps to remove the adverse effects of the subsidy or withdraw the subsidy within six months from the date when the DSB adopts the panel report or the Appellate Body report, and in the absence of agreement on compensation, the DSB shall grant authorization to the complaining Member to take countermeasures, commensurate with the degree and nature of the adverse effects determined to exist, unless the DSB decides by consensus to reject the request.

6.33. Article 7.9 has two relevant parts. The latter part of Article 7.9 provides the basis for the DSB to "grant authorization to the complaining Member to take countermeasures, commensurate with the degree and nature of the adverse effects determined to exist". The former part conditions the DSB's authorization to grant such countermeasures with respect to a given "subsidy" on the occurrence of an "event" *vis-à-vis* that subsidy, which the parties refer to as a "trigger" event. The "trigger" event is the respondent's failure to comply with the recommendations and rulings of the DSB issued as a result of an original proceeding before the end of the six-month implementation period specified in Article 7.8.¹⁶¹ As per the terms of Article 7.8, that status of non-compliance arises if the respondent has neither withdrawn the subsidy nor taken appropriate steps to remove its adverse effects. It follows, therefore, that Article 7.9 establishes that, for countermeasures to be authorized with respect to a particular subsidy, that subsidy must still cause adverse effects *in the post-implementation period*. Accordingly, "the adverse effects determined to exist", within the meaning of Article 7.9, must be those caused *in the post-implementation period* by a subsidy with respect to which a respondent has failed to comply with the DSB recommendations and rulings.

6.34. In the light of the above observations regarding Article 7.9, we note that Articles 7.9 and 7.10 are closely connected and should be read together. The procedures that they prescribe are intertwined both temporally and substantively. Indeed, an arbitration occurring under Article 7.10 is a step that occurs *before* the DSB authorizes countermeasures pursuant to the latter part of Article 7.9. Moreover, the overarching procedural purpose of an arbitration conducted under Article 7.10 is to advise the DSB as to what constitutes "countermeasures, commensurate with the degree and nature of the adverse effects determined to exist".¹⁶² We thus consider that the phrase "the adverse effects determined to exist" should be interpreted the same way in Articles 7.9 and 7.10. That being the case, we consider that the scope of the phrase "the adverse effects determined to exist" within the context of both Articles 7.9 and 7.10 is limited to adverse effects caused in the post-implementation period by a subsidy with respect to which a respondent has failed to comply with previously issued DSB recommendations and rulings. Indeed, if this were not the case, Article 7.10 may incongruously direct an arbitrator to advise the DSB to authorize something that the DSB is not permitted to authorize under the terms of Article 7.9.¹⁶³

¹⁶⁰ The text of Article 7 reflects that interconnectivity. For example, paragraphs cross-reference each other (see e.g. Article 7.2 of the SCM Agreement (referring back to "consultations under paragraph 1")) and/or presuppose awareness of previous paragraphs (see e.g. Article 7.5 of the SCM Agreement (stating "{t}he panel shall review the matter and shall submit its final report to the parties to the dispute", where "the panel" is the panel described in the preceding paragraphs)).

¹⁶¹ The context of Article 7.9 further indicates that Article 7.9 is focused on "adverse effects" caused by a particular "subsidy" that has not been brought into compliance by the end of the six-month implementation period specified in Article 7.8. Article 7 speaks consistently of a "subsidy" in the singular, including Article 7.8, which also refers to "adverse effects" as being caused by a particular "subsidy".

¹⁶² Article 22.7 of the DSU indicates that "{t}he DSB ... shall upon request, grant authorization to suspend concessions or other obligations *where the request is consistent with the decision of the arbitrator*". (emphasis added)

¹⁶³ We note that if the phrase "the adverse effects determined to exist" within the meaning of Article 7.10 is read in isolation, it may be unclear why the Arbitrator would, for example, and as both parties accept that we should, value the adverse effects caused by the Washington State B&O tax rate reduction identified in the *compliance* proceedings but not those identified in the *original* proceedings, as both were literally "adverse effects determined to exist".

6.35. It will also be recalled that this arbitration is governed by both Article 7.10 of the SCM Agreement and Article 22.6 of the DSU, which Article 7.10 cross-references.¹⁶⁴ It will further be recalled that Articles 22.2 and 22.6 of the DSU contain conditional language similar to that of Article 7.9 of the SCM Agreement.¹⁶⁵ The arbitrator in *EC – Bananas III (US) (Article 22.6 – EC)* explained that the language of Articles 22.2 and 22.6 of the DSU "confirm{ed}" that "any assessment of the level of nullification or impairment {as mandated under Article 22.7 of the DSU} presupposes an evaluation of consistency or inconsistency with WTO rules of the implementation measures taken by the {respondent}".¹⁶⁶ In other words, the "nullification or impairment" that should be valued by an arbitrator under Article 22.7 is that caused by: (a) a measure with respect to which there has been an evaluation regarding whether the responding Member failed to comply with recommendations and rulings of the DSB; and (b) that exists at the end of deadline to comply.¹⁶⁷ We agree with this interpretation of Articles 22.2 and 22.6. We further recall that suspension of concessions or other obligations authorized under Article 22 of the DSU and countermeasures authorized under Article 7 of the SCM Agreement have the same purpose, i.e. to induce compliance.¹⁶⁸ Thus, we observe that there is no compelling reason to conclude that Article 22 of the DSU and Article 7 of the SCM Agreement should be interpreted differently in this specific context. That is, under both provisions, arbitrators should value the effects of measures that occur as a result of the failure of the respondent to comply with the relevant recommendations and rulings of the DSB.

6.36. Our interpretation of Articles 7.9 and 7.10 further appears consistent with instructive aspects of how both previous arbitrators that have conducted arbitrations under Article 7.10 interpreted their mandates. When the arbitrator in *US – Upland Cotton (Article 22.6 – US II)* – the first arbitrator to conduct an arbitration under Article 7.10 – interpreted its mandate, it interpreted the terms "countermeasures", "commensurate with", and "degree and nature of the adverse effects determined to exist" with reference to these terms as contained in Article 7.9¹⁶⁹, even though Article 7.10 contains the mandate of the arbitrator. This illustrates not only the close connection assumed to exist between Articles 7.9 and 7.10, generally, but also suggests that the arbitrator considered that the term "the adverse effects determined to exist", specifically, should be interpreted similarly in the contexts of Article 7.9 and 7.10. In delineating its mandate under Article 7.10, the DS316 arbitrator stated that "a complaining party's impetus to request authorization to take countermeasures or suspend concessions or other obligations is triggered by a responding party's

¹⁶⁴ Decisions by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 3.4 ("This arbitration is governed by both Article 7.10 and Article 22.6"); and *US – Upland Cotton (Article 22.6 – US II)*, para. 4.19 ("Article 22.6 of the DSU remains relevant, as the general legal basis under which the proceedings are conducted.").

¹⁶⁵ See Article 22.6 ("When the situation described in paragraph 2 occurs, the DSB, upon request, shall grant authorization to suspend concessions or other obligations within 30 days of the expiry of the reasonable period of time") (emphasis added) and Article 22.2 ("If the Member concerned fails to bring the measure found to be inconsistent with a covered agreement into compliance therewith or otherwise comply with the recommendations and rulings within the reasonable period of time If no satisfactory compensation has been agreed within 20 days after the date of expiry of the reasonable period of time, any party ... may request authorization from the DSB to suspend the application to the Member concerned of concessions or other obligations under the covered agreements.") (emphasis added). Article 22.7 supplies the mandate of an arbitrator, providing, in relevant part: "The arbitrator acting pursuant to paragraph 6 ... shall determine whether the level of such suspension is equivalent to the level of nullification or impairment."

¹⁶⁶ Decision by the Arbitrator, *EC – Bananas III (US) (Article 22.6 – EC)*, paras. 4.3-4.4. (emphasis added)

¹⁶⁷ The *Bananas III (US)* arbitrator rejected the notion that it "could resort to the option of measuring the level of nullification or impairment on the basis of our findings in the original dispute, as modified by the Appellate Body and adopted by the DSB", because "{t}o do that would mean to ignore altogether the undisputed fact that the {respondent} has taken measures to revise {the measure at issue}. That is certainly not the mandate that the DSB has entrusted to us". (Decision by the Arbitrator, *EC – Bananas III (US) (Article 22.6 – EC)*, para. 4.7) See also Decision by the Arbitrator, *US – Tuna II (Mexico) (Article 22.6 – US)*, fn 55 ("{W}e consider that the 'level of nullification or impairment' referred to in Article 22.7 is the level of nullification or impairment caused by the WTO-inconsistent original or compliance measure that existed at the time of expiry of the {reasonable period of time to comply}"); and Award of the Arbitrator, *US – Section 110(5) Copyright Act (Article 25)*, para. 4.19 (explaining that "{u}nlike Article 22.6, which closely relates to compliance (or absence thereof) at the end of the reasonable period of time, Article 25 is silent as to the date on which a matter referred to arbitration should be assessed"). (fns omitted)

¹⁶⁸ See fn 159 above.

¹⁶⁹ Decision by the Arbitrator, *US – Upland Cotton (Article 22.6 – US II)*, section IV.C.1 (examining relevant textual terms under heading entitled "The terms of Article 7.9 of the SCM Agreement").

failure to bring its measures into compliance with its relevant WTO obligations after being recommended to do so by the DSB".¹⁷⁰ The arbitrator continued:

We consider that for purposes of the present arbitration proceeding, the relevant panel and Appellate Body reports {identifying the "adverse effects determined to exist" that the Arbitrator should value} *are the compliance reports (rather than the original panel and Appellate Body reports)*. It is the findings from the compliance proceedings, *by establishing that the European Union "has not taken appropriate steps to remove the adverse effects of the subsidy or withdraw the subsidy within six months" (Article 7.9 of the SCM Agreement), which provide the basis for the DSB to grant authorization to the United States to take countermeasures.*¹⁷¹ (emphasis added)

6.37. Our interpretation of Article 7.10 is also consistent with previous, instructive arbitrator practice concerning the choice of reference periods used to determine levels of Annual Suspension. We thus recall that "levels of ... Annual Suspension have generally been determined based on the trade effects of relevant measures during past time-periods The past time-periods selected have usually been short-term periods *immediately following or including the time at which the responding party should have come into compliance*. Arbitrators ... have commented on the appropriateness of {this method}, observing that *the basic purpose of an arbitration proceeding is to determine the harm to the complaining party caused by that precise failure*".¹⁷² Valuing economic harm caused by a respondent's failure to comply by the necessary time presupposes some kind of an evaluation regarding whether such a failure occurred. In other words, the practice of using a single reference period occurring at or around the time by when a respondent should have complied¹⁷³ to determine maximum levels of Annual Suspension appears derivative of a more substantive understanding of the object and purpose of arbitration proceedings, i.e. valuing harm arising from the occurrence of the "situation" and/or "event" referenced in Article 22.6 of the DSU and Article 7.9 of the SCM Agreement.¹⁷⁴

6.38. Based on the foregoing, we find that "the adverse effects determined to exist", within the meaning of Article 7.10 of the SCM Agreement, are those caused in the post-implementation period by a subsidy with respect to which a respondent has failed to comply with the recommendations and rulings of the DSB.¹⁷⁵

¹⁷⁰ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 5.2 (citing Articles 22.2 and 22.6 of the DSU; Article 7.9 of the SCM Agreement; and Decision by the Arbitrator, *US – Tuna II (Mexico) (Article 22.6 – US)*, para. 3.20).

¹⁷¹ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 5.5. See also *Ibid.* fn 67 (opining that an Article 7.10 arbitration is "link{ed} ... to the WTO-inconsistent original measure or a subsequent WTO-inconsistent compliance measure that was in existence at the time of the expiry of the implementation period"); and Decision by the Arbitrator, *US – FSC (Article 22.6 – US)*, para. 4.3 (indicating that the term "appropriate countermeasures" within the meaning of Article 4.11 should be interpreted in a manner respecting the "parameters of what is permissible under" Article 4.10, which allows the DSB to authorize such countermeasures).

¹⁷² Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.56 and fn 162 thereto. (emphasis added)

¹⁷³ We note that the arbitrator in *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)* did not value "the adverse effects determined to exist" in the reference period used in the original proceedings. This was so even though "the adverse effects determined to exist" in the original and compliance proceedings in DS316 differed in both nature (e.g. displacement was found in the original but not compliance proceedings) and degree (e.g. adverse effects were found to exist in different sets of product markets). Also, the European Union has not argued that we should value "the adverse effects determined to exist" in the original proceedings that were caused by the Washington State B&O subsidy.

¹⁷⁴ See also fn 167 above. Previous arbitrators have also emphasized that the provisions of Article 22 of the DSU compel the conclusion that it is the effects of the measure existing at the time the reasonable period of time in which to comply expires that should be examined when assessing proposed levels of suspension of concessions, rather than the effects of the measure as it may have existed at the time of an original proceeding or a measure that came into existence after the expiry of the implementation period.

¹⁷⁵ We recall that the European Union notes that the DS316 arbitrator stated that "{u}ntil and unless substantive compliance has been achieved and is multilaterally confirmed or a mutually agreed solution has been reached, there remains a valid rationale for granting Annual Suspension and maintaining it at the authorized level". (Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.52) This quote is inapposite. In making this statement the arbitrator was not determining whether countermeasures could be granted with reference to the effects caused by a particular

6.4.1.2 Whether the 2004-2006 R&D Adverse Effects fall within the scope of "the adverse effects determined to exist" under the terms of Article 7.10

6.39. In the previous section, we found that "the adverse effects determined to exist", within the meaning of Article 7.10, are those caused in the post-implementation period by a subsidy with respect to which a respondent has failed to comply with the recommendations and rulings of the DSB. This section therefore considers whether the 2004-2006 R&D Adverse Effects may be considered as among, or somehow representing, such "adverse effects determined to exist". The European Union has advanced two ways in which we could determine this to be the case. We address each in turn.

6.40. First, the European Union's principal argument in this context is that the 2004-2006 R&D Adverse Effects qualify as "the adverse effects determined to exist" within the meaning of Article 7.10 because the Appellate Body reversed the compliance panel's findings that the European Union had not demonstrated that the United States failed to bring the pre-2007 aeronautics R&D subsidies into compliance. In other words, the European Union argues that the United States' non-compliance in the post-implementation period (i.e. the satisfaction of the "trigger condition" in Article 7.9) is established via the continued validity of the original panel's findings that the pre-2007 aeronautics R&D subsidies were inconsistent with Article 5 and 6 of the SCM Agreement. As a formal matter, we first observe that the original proceedings did not and indeed, could not, determine whether the United States had failed to comply with the recommendations and rulings of the DSB that flowed from such original proceedings, or, relatedly, whether the pre-2007 aeronautics R&D subsidies caused adverse effects in the post-implementation period.¹⁷⁶ Beyond that observation, we note that the original panel identified adverse effects caused by the pre-2007 aeronautics R&D subsidies in the time-period of 2004-2006, i.e. the 2004-2006 R&D Adverse Effects. The end of that temporal period occurred years before the end of the implementation period (i.e. September 2012). In the light of these circumstances, and recalling that the "adverse effects determined to exist" are those caused in the post-implementation period by a subsidy with respect to which a respondent has failed to comply with the recommendations and rulings of the DSB, we discern no grounds upon which to find that the 2004-2006 R&D Adverse Effects may be considered among, or somehow representing, "the adverse effects determined to exist" in this proceeding based on the findings in the original proceedings.¹⁷⁷

6.41. Second, the European Union also argues that the 2004-2006 R&D Adverse Effects qualify as "the adverse effects determined to exist" within the meaning of Article 7.10 because "the European Union has established non-compliance *in the compliance proceedings* with respect to the B&O tax rate reduction".¹⁷⁸ "Specifically, the European Union successfully demonstrated that ... the United States continues to provide WTO-inconsistent subsidies to Boeing that cause adverse effects to EU interests" and "that the B&O tax rate reduction causes adverse effects to the European Union".¹⁷⁹ This observation, while accurate, is, in our view, inapposite in this context. As described above, Articles 7.9 and 7.10 operate with respect to a particular "subsidy". The particular subsidies here are the pre-2007 aeronautics R&D subsidies, *not* the B&O tax rate reduction found in the compliance proceedings to continue to cause adverse effects in the post-implementation period. We therefore find no grounds upon which to conclude that the compliance proceedings findings concerning the adverse effects caused by the B&O tax rate reduction imply that the 2004-2006 R&D

subsidy, but was addressing the propriety of granting countermeasures in the form of Annual Suspension, specifically.

¹⁷⁶ We further recall that the Appellate Body has explained that the "effects of a subsidy will ordinarily dissipate over time" and, further, that a respondent may not have a compliance obligation with respect to a subsidy regardless of whether the subsidy still causes adverse effects. (Appellate Body Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, para. 5.373 and fn 932)

¹⁷⁷ We note that the European Union has cited the panel and Appellate Body reports in *US – FSC (Article 21.5 – EC II)* for the proposition that the recommendations and rulings from the original proceeding remain "operative" until the "problem is entirely fixed" (i.e. until compliance is achieved). Even if true as a general proposition, as explained above, the findings of the original panel still do not, in these circumstances, resolve the key issues before us, i.e. the compliance-related issues that flow from the recommendations and rulings resulting from the original panel report.

¹⁷⁸ European Union's comments on the United States' response to Arbitrator question No. 43, para. 18. (emphasis original)

¹⁷⁹ European Union's comments on the United States' response to Arbitrator question No. 44, paras. 40-42.

Adverse Effects may also be considered among, or somehow representing, "the adverse effects determined to exist" for the purpose of this proceeding.¹⁸⁰

6.42. The European Union also raises the possibility of the Arbitrator determining whether the "trigger" condition in Article 7.9 is satisfied *vis-à-vis* the pre-2007 aeronautics R&D subsidies, i.e. whether the pre-2007 aeronautics R&D subsidies cause adverse effects in the post-implementation period, but at the same time, it has also stated that the Arbitrator does not have the mandate to do so. The United States similarly broaches the general possibility of an arbitrator being able to address compliance-related issues.

6.43. Our mandate under Article 7.10 is silent as to determining a respondent's compliance status – a determination that involves, in this case, evaluating whether the pre-2007 aeronautics R&D subsidies cause adverse effects in the post-implementation period. We thus consider that we are not required to address this compliance issue. We further consider that we need not determine whether an arbitrator acting under Article 7.10 of the SCM Agreement has the discretion to engage in compliance-related inquiries of this kind, because even if we had such discretion¹⁸¹, we would decline to exercise it in these circumstances. First, we note that addressing compliance issues would conflate our role with that of a panel established under Article 21.5 of the DSU.¹⁸² Moreover, arbitration proceedings are intended to proceed on expedited timelines and addressing the relevant compliance issues would lead to, in our estimation, unavoidable and significant delays.¹⁸³ In this regard, the compliance panel engaged in lengthy and complex analyses in making determinations regarding the effects of the pre-2007 aeronautics R&D subsidies. It appears clear to us that we would also need to engage in complex factual analyses if we were to address this compliance-related question.¹⁸⁴ We

¹⁸⁰ We recognize that the United States broaches the possibility that an agreement between the parties might suffice as to satisfy relevant conditions imposed by Article 7.9 of the SCM Agreement. We do not exclude the possibility that party agreements (or perhaps even lack of disagreements) with respect to compliance-related issues could be taken into account by an arbitrator. No agreement exists here, however, with respect to whether the pre-2007 aeronautics R&D subsidies cause adverse effects in the post-implementation period. Further, in the compliance proceedings, the parties vigorously contested whether the United States achieved compliance with respect to the pre-2007 aeronautics R&D subsidies by removing the relevant adverse effects by the end of the implementation period. This possibility is thus moot for our purposes.

¹⁸¹ It will be recalled that it is the Arbitrator's mandate to value "the adverse effects determined to exist". Previous arbitrators have interpreted this phrase as referring to adverse effects identified by previous panels and the Appellate Body. (Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft* (Article 22.6 – EU), para. 5.5 (citing, *inter alia*, Decision by the Arbitrator, *US – Upland Cotton* (Article 22.6 – US II), paras. 4.49-4.50))

¹⁸² See e.g. Decisions by the Arbitrator, *EC and certain member States – Large Civil Aircraft* (Article 22.6 – EU), para. 6.65 ("If we therefore were to determine only present adverse effects, this would conflate our role with that of a compliance panel established under Article 21.5 of the DSU."); and *US – Tuna II (Mexico)* (Article 22.6 – US), para. 3.52 ("The Arbitrator notes that the existence of Article 21.5 as a separate provision suggests that generally, compliance issues should be dealt with separately from the assessment of the level of nullification or impairment, by a compliance panel."). One early arbitrator, acting under Article 22.7 of the DSU and in the absence of a previous compliance proceeding, did address compliance-related issues, apparently impelled by special instructions issued to the arbitrator from the DSB and the perceived need to determine "equivalence" between the proposed level of suspension and the "nullification and impairment" caused by the respondent's alleged failure to comply by the necessary time. (Decision by the Arbitrator, *EC – Bananas III (US)* (Article 22.6 – EC), section IV and para. 4.15 (indicating that the arbitrator's approach was related to the "special circumstances of this case")) We discern no similar "special circumstances" in this proceeding.

¹⁸³ See Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft* (Article 22.6 – EU), para. 6.65 (explaining that "an inquiry into the existence of adverse effects requires fact-intensive analyses. Engaging in such analyses would therefore substantially lengthen the duration of this expedited proceeding").

¹⁸⁴ Based on the parties' arguments in the compliance proceedings and in this proceeding, resolving this question would likely turn on ascertaining the precise extent to which the acceleration effects of the pre-2007 aeronautics R&D subsidies had an impact, not only on the timing of the launch of the 787, but also on the timing of its first delivery. (Appellate Body Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 5.415) The European Union further alleges that the pre-2007 aeronautics R&D subsidies also affected the market presence of the 777X and 737 MAX. (European Union's written submission, para. 359)

consider that this would require seeking both parties' views on this issue, seeking additional information from, and asking questions of, the parties, in addition to drafting the relevant findings.¹⁸⁵

6.44. We further note that in this proceeding, neither party has expressed its outright support for the Arbitrator determining the effects of the pre-2007 aeronautics R&D subsidies in the post-implementation period in the circumstances. We specifically recall that the European Union has stated that "the European Union considers that the Arbitrat{or} should not go down th{e} path of making its own adverse effects determination".¹⁸⁶ Moreover, the European Union has stated that "it is not the European Union's position that, in the procedural circumstances of this case, the Arbitrat{or} is mandated, *or even entitled*, to make a determination of *whether* the pre-2007 aeronautics R&D subsidies cause adverse effects"¹⁸⁷, and that even if the Arbitrator did address this issue, the European Union maintains that it "may not result in a delay of these proceedings"¹⁸⁸ (which, as discussed, is a practical impossibility). The United States has also indicated that it considers it inappropriate for the Arbitrator to address this compliance question in these circumstances.¹⁸⁹

6.45. Finally, we consider it a relevant point that, in this dispute, as per the parties' Sequencing Agreement, compliance proceedings under Article 21.5 of the DSU have been completed. In those compliance proceedings the European Union attempted, but ultimately failed, to establish that the pre-2007 aeronautics R&D subsidies caused adverse effects in the post-implementation period. As a result, the European Union was unsuccessful in making its case that the United States had failed to comply with the recommendations and rulings of the DSB with respect to those subsidies.

6.46. In sum, we find that we are not required under the terms of Article 7.10 to determine whether the pre-2007 aeronautics R&D subsidies cause adverse effects in the post-implementation period. Even if Article 7.10 provides us with the discretion to do so, we would decline to exercise such discretion in the light of, in our estimation, the compelling set of circumstances set out above.¹⁹⁰

¹⁸⁵ In this proceeding, the European Union has adduced its submissions from the compliance proceedings and also offered to submit its exhibits from that proceeding. We note that these submissions are, by nature, argumentation. Further, such submissions and exhibits pertain to the September 2012-September 2015 reference period. If we were to address the compliance issue, it is not clear that we would examine only that same reference period, essentially performing a remand of the first compliance proceeding. Considering an updated reference period would instead appear more consistent with the role of a compliance adjudicator. (See Panel Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – EU)*, para. 6.1443 (explaining that "it is well established that a panel tasked with reviewing the merits of claims made under Article 6.3(a), (b), and (c) of the SCM Agreement must focus its efforts on determining the extent to which the challenged subsidies are a 'genuine and substantial' cause of serious prejudice *in the present*.")) (emphasis original)) If the Arbitrator were to address *present* compliance, the Arbitrator might also have to examine whether the United States has now "withdraw{n}" the subsidies within the meaning of Article 7.8. This examination may also involve: (a) determining whether those subsidies had ceased to exist (see Appellate Body Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, paras. 5.383 and 6.11.a (explaining that the obligation to "take appropriate steps to remove the adverse effects or ... withdraw the subsidy" concerns only subsidies that continue to be granted or maintained by the implementing Member at the end of the implementation period, and that a Member cannot be required to withdraw a subsidy that had ceased to exist)); and/or (b) examining any alleged "measures taken to comply" within the meaning of Article 21.5 of the DSU. (see Appellate Body Reports, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 5.328; and *US – Continued Suspension*, paras. 305-309).

¹⁸⁶ European Union's written submission, para. 357.

¹⁸⁷ European Union's response to Arbitrator question No. 5, para. 32. (first emphasis added)

¹⁸⁸ See e.g. European Union's opening statement, para. 137. We note the European Union's suggestion that the Arbitrator could address this compliance-related issue and avoid material delays in the proceeding. This is so because, in the European Union's view, the United States has not engaged with the European Union's argumentation or evidence offered with respect to this compliance-related inquiry. Thus, the European Union asserts that the Arbitrator would be "making the case" for the United States if we were to decline to find that the European Union has demonstrated, in this arbitration, the United States' non-compliance following the implementation period with respect to the pre-2007 aeronautics R&D subsidies. We note, however, that we would consider it inappropriate simply to accept the European Union's arguments on this front without further and thoroughly exploring the compliance issue with the parties. As noted, addressing compliance issues is not specified by our mandate. We cannot thus assume that the United States should have engaged in compliance-related argumentation without our prompting. Therefore, we do not believe that the European Union's suggested approach could avoid significant delays in this proceeding.

¹⁸⁹ United States' response to Arbitrator question No. 4, para. 29; and No. 44, para. 13.

¹⁹⁰ We do not, and need not, determine whether adverse effects found to exist in an original proceeding can serve to evidence "the adverse effects determined to exist" in a subsequent arbitration.

6.4.1.3 Conclusion

6.47. Based on the foregoing, we decline to value the 2004-2006 R&D Adverse Effects because we discern no grounds upon which to conclude that the 2004-2006 R&D Adverse Effects are, or somehow represent, adverse effects caused in the post-implementation period by a subsidy with respect to which a respondent has failed to comply with the recommendations and rulings of the DSB.¹⁹¹ The 2004-2006 R&D Adverse Effects do not, therefore, fall within the scope of what "the adverse effects determined to exist" are for purposes of this specific proceeding.

6.4.2 Structure of the countermeasures in respect of the post-implementation Washington State B&O Tax Rate Reduction Adverse Effects

6.48. As previously noted, the European Union proposes countermeasures in the form of Annual Suspension based on the adverse effects determined to exist in a past period, which relevantly for the post-implementation B&O Tax Rate Reduction Adverse Effects, is the reference period used by the compliance panel to ascertain the existence of adverse effects of the B&O tax rate reduction in the post-implementation period. The United States agrees with this proposed form of countermeasures.

6.49. In the DS316 arbitration proceeding, the parties dedicated significant portions of their submissions to debating whether it was permissible for the arbitrator to determine the maximum level of countermeasures in the form of Annual Suspension based on the value of the adverse effects determined to exist in the reference period of the compliance panel in that dispute (December 2011-2013).¹⁹²

6.50. The DS316 arbitrator explained, *inter alia*, that the findings from the compliance proceedings in that dispute were that LA/MSF for the A380 and A350XWB programmes caused adverse effects in the form of significant lost sales within the meaning of Article 6.3(c) of the SCM Agreement and impedance within the meaning of Articles 6.3(a) and (b) of the SCM Agreement. The DS316 arbitrator concluded that it was consistent with its mandate under Article 7.10 to determine the maximum level of countermeasures based on the instances of lost sales and impedance that were determined to exist in the compliance panel's reference period and to consider these as the "adverse effects determined to exist" for purposes of that proceeding.¹⁹³ Moreover, the DS316 arbitrator considered that under the SCM Agreement and the DSU, the maximum level of countermeasures or suspension of concessions that may be authorized can be a function of the effects of relevant measures during a past reference period. However, the maintenance of suspension of concessions at that maximum level is predicated, not on the ongoing effects of the relevant measures, but on continued non-compliance of the responding party.¹⁹⁴ The DS316 arbitrator accordingly concluded that it was appropriate to determine the maximum level of Annual Suspension based on the value of the adverse effects determined to exist in the temporally circumscribed compliance panel reference period and to grant countermeasures in the form of Annual Suspension.¹⁹⁵

6.51. We agree with the analysis and reasoning of the DS316 arbitrator in this regard.¹⁹⁶ In this proceeding, both parties also advocate that we value the adverse effects determined to exist based

¹⁹¹ We emphasize that, in so finding, we make no assumptions regarding whether the United States did or did not comply with the relevant recommendations and rulings of the DSB (and relatedly, whether the pre-2007 aeronautics R&D subsidies cause adverse effects in the post-implementation period). We also note that, because we do not reach the compliance issue, we "make a case" for neither party with respect to this issue. (See European Union's comments on the United States' response to Arbitrator question No. 44, para. 50(c))

¹⁹² Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.31.

¹⁹³ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.44.

¹⁹⁴ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, paras. 6.46-6.60. For a more detailed discussion of this issue, see Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, Annex C-1, Communication from the Arbitrator Preliminary Ruling (Conclusion).

¹⁹⁵ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.76.

¹⁹⁶ This analysis and reasoning is also consistent with the reasoning underlying the Arbitrator's ruling declining the United States' request for leave to file an additional submission regarding the purported

on a past reference period and use the annualized value of such adverse effects as the maximum level of Annual Suspension.¹⁹⁷ In section 6.4.1 above, we explained why we decline to value the 2004-2006 R&D Adverse Effects. Our valuation of the "adverse effects determined to exist" in the present proceeding therefore concerns the post-implementation Washington State B&O Tax Rate Reduction Adverse Effects.

6.4.3 The reference period for the post-implementation Washington State B&O Tax Rate Reduction Adverse Effects

6.52. In this section we address a factual issue regarding the temporal period over which the compliance panel assessed the existence of adverse effects caused by the Washington State B&O tax rate reduction (the so-called reference period). The resolution of this issue is relevant to our task of assessing the proposed level of countermeasures because both parties agree, as do we, that the value of the adverse effects must be *annualized* in order to fashion a "commensurate" level of Annual Suspension. The length of the reference period is the period over which both parties agree that at least some of the adverse effects determined to exist should be annualized (see sections 6.4.5, 6.4.5.1, 6.4.7.3, and 6.4.8.2 below).

6.53. The European Union argues that the reference period used by the compliance panel to determine the existence of the post-implementation B&O Tax Rate Reduction Adverse Effects was a 33-month period from January 2013 until September 2015. The European Union considers that, although the reasonable period of time for implementation under Article 7.9 (which we will refer to generally as the "implementation period") expired on 23 September 2012, the compliance panel adopted a reference period that commenced in January 2013. It bases this argument on the compliance panel's statement in footnote 3368 of the compliance panel report (referring to a "reference period of 2013-2015").¹⁹⁸ The European Union refers also to similar references by the Appellate Body to a "2013-2015 reference period".¹⁹⁹

6.54. The United States argues that the compliance panel assessed the existence of adverse effects over a 36-month period that commenced with the expiration of the implementation period in September 2012, until September 2015. It considers the compliance panel's reference in footnote 3368 of the compliance panel report to a "reference period of 2013-2015" to be a "useful, rough shorthand" for the post-implementation period.²⁰⁰ In addition, the United States argues that the compliance panel's references elsewhere in its report to the "post-implementation period" support its position that the compliance panel understood the post-implementation reference period to be the period after 23 September 2012.²⁰¹

6.55. The Arbitrator notes that, aside from the single reference in footnote 3368 of the compliance panel report to a "reference period of 2013-2015", the compliance panel does not use the concept of reference period in its analysis or findings. Nor does the compliance panel define such a period.²⁰²

elimination of the Washington State B&O tax rate reduction as of 1 April 2020. (See Arbitrator's decision on the United States' request for leave to file an additional submission regarding the implications of the purported elimination of the Washington State B&O tax rate reduction on the permitted level of countermeasures, dated 17 June 2020, Annex C-7)

¹⁹⁷ We further note, as did the DS316 arbitrator, that "{w}e recognize that there may be other permissible ways to structure countermeasures. We make no judgments as to the permissibility of other structures, whether in this dispute or others." (Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, fn 188)

¹⁹⁸ See European Union's written submission, para. 153.

¹⁹⁹ Appellate Body Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, paras. 5.480, 5.494, and 5.497 and fn 1117 thereto.

²⁰⁰ United States' written submission, para. 109. The United States argues additionally that the 2013-2015 period referred to in footnote 3368 of the compliance panel report is also a 36-month period. (United States' written submission, para. 110)

²⁰¹ United States' response to Arbitrator question No. 37, para. 117 (referring to para. 9.37 of the compliance panel report). As noted in para 6.9 above, the United States proposes that the post-compliance B&O Tax Rate Reduction Adverse Effects all be valued as lost sales and that the total value is annualized, not over the compliance panel's reference period, but over the 105-month period over which those sales occurred.

²⁰² The European Union used the term "reference period" in its argumentation before the compliance panel, and in response to a question from the panel, clarified that the reference period, for purposes of determining whether any of the non-withdrawn subsidies presently causes adverse effects, is the period since the end of the implementation period. (Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 9.97)

Rather, the compliance panel consistently refers throughout its analysis to the "post-implementation period".²⁰³ The post-implementation period to which the compliance panel refers began on 24 September 2012 because that is the day after the expiration of the implementation period.²⁰⁴

6.56. The question is therefore whether the compliance panel, in determining whether the European Union had demonstrated that the unwithdrawn subsidies caused adverse effects in the post-implementation period, nevertheless examined the existence of those adverse effects in a period which began only in January 2013 rather than from the expiration of the implementation period in September 2012.

6.57. As we explain further below, we do not see anything in the findings of the compliance panel to suggest that the compliance panel's examination of the existence of the adverse effects in the post-implementation period was confined to a period that began only in January 2013, as opposed to September 2012.

6.58. By way of background, in its first written submission in the compliance proceedings, the European Union had presented evidence of alleged lost sales, impeded and displaced imports and exports and price suppression, based on sales campaigns that had occurred in the period 2007-2012.²⁰⁵ In September 2015, the compliance panel asked the European Union to update the information on which it relied to demonstrate its adverse effects claims, to include 2013 and 2014, and to the extent possible, the elapsed portion of 2015.²⁰⁶ The European Union submitted such information, which included the outcomes of LCA sales campaigns since September 2012 that the European Union considered were additional significant lost sales, as well as order and delivery data based on information current to September 2015.²⁰⁷

6.59. The compliance panel examined all of the information on single-aisle sales campaigns occurring between 2007 and 2015 which the European Union had submitted as evidence of adverse effects of the subsidies.²⁰⁸ In section 9.2.4 of its report²⁰⁹ the compliance panel explained that its conclusions as to whether the European Union had demonstrated that any or all of the US subsidies that the United States had failed to withdraw, within the meaning of Article 7.8, caused adverse effects, "will focus on serious prejudice data presented by the parties with respect to the *post-implementation period*, as it is only with respect to the effects found to exist in this period that the United States may be found to have failed to comply with its obligation under Article 7.8 to take appropriate steps to remove the adverse effects".²¹⁰ The compliance panel therefore indicated that its findings of adverse effects concerned adverse effects demonstrated to exist at some point after 23 September 2012.

6.60. Of the single-aisle sales campaigns, the compliance panel identified five in the 2007-2015 period in which the outcome of the campaign turned on the prices offered by Airbus and Boeing, rather than on other factors.²¹¹ There were no such "price-sensitive" sales campaigns identified for

²⁰³ See Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, paras. 9.13-9.15, 9.89, 9.107, 9.108-9.109, 9.117, 9.122, 9.336, 9.342, 9.376, 9.402, 9.407, 9.426, 9.427 and fn 3362 thereto, 9.438, 9.444, and 9.467, table 12, and fns 3335 and 3380. The Appellate Body's findings similarly refer to the existence of adverse effects *in the post-implementation period*, rather than in a "reference period". (Appellate Body Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 6.13)

²⁰⁴ See e.g. Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 9.101.

²⁰⁵ Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, paras. 9.98-9.99.

²⁰⁶ Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 9.103.

²⁰⁷ See Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, fn 3274 (Exhibit EU-1568), fn 3303 (Exhibit EU-1658), and fn 3369 (Exhibits EU-1660 and EU-1659).

²⁰⁸ See tables 9 and 10 for the twin-aisle sales campaigns (Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 9.244) and table 12 for the single-aisle sales campaigns (Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 9.381).

²⁰⁹ This section of the compliance panel report is titled, "The relevant time-period over which to assess whether the European Union has demonstrated that the United States has failed to take appropriate steps to remove the adverse effects".

²¹⁰ Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 9.107. (emphasis added)

²¹¹ These five sales campaigns were: Fly Dubai 2008, Delta Airlines 2011, Air Canada 2013, Icelandair 2013, and Fly Dubai 2014. (Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, paras. 9.378-9.385)

2012, including for the final quarter of 2012.²¹² However, the fact that the first price-sensitive sales campaign that was identified by the compliance panel in the post-implementation period arose only in 2013 (rather than in the final quarter of 2012) does not mean that the compliance panel determined the existence of the adverse effects only from January 2013 rather than from the expiration of the implementation period in September 2012. Nor does it mean that the compliance panel determined whether the United States had complied with its obligation under Article 7.8 of the SCM Agreement only from January 2013. This would be at odds with the multiple places in the compliance panel's report where the findings are expressly formulated in terms of the adverse effects found to exist in the post-implementation period, without qualification.

6.61. We therefore conclude that the period over which the compliance panel examined the existence of adverse effects in the post-implementation period ran from the commencement of that period (September 2012) until the date of the latest submission of the relevant sales campaign, order and delivery data, which was September 2015. We accordingly consider that the period over which the compliance panel determined the existence of adverse effects in the post-implementation period is the 36-month period from September 2012 through September 2015. Going forward in this Decision, we will refer to this 36-month period as the "reference period".

6.4.4 Consideration of events occurring after the reference period

6.62. We recall that our mandate under Article 7.10 of the SCM Agreement is to determine countermeasures that are "commensurate with the adverse effects determined to exist", which in this proceeding means the value of the identified lost sales and threat of impedance. One issue that arises in this context is whether evidence of events pertaining to these lost sales and threatened impedance that occurred *after* the reference period and, therefore, was not available to the compliance adjudicators, can be taken into account in determining the value of these adverse effects. We note that both parties have taken into account events that occurred after the reference period in determining the value of adverse effects and thus appear to implicitly agree that the Arbitrator should take into account the most recent information pertaining to the lost sales and threatened impedance in determining the value of these adverse effects.²¹³

6.63. We observe that there is no legal impediment in the SCM Agreement or in the DSU for the Arbitrator to consider facts that were not on the record of a previously conducted proceeding in this dispute. Further, as was noted by the DS316 arbitrator, considering that the focus of an arbitration proceeding is different from that of an original or compliance proceeding, the factual information that is placed on the record of the arbitrator could differ from the factual information that forms part of the evidentiary records of previous original or compliance proceedings.²¹⁴ Accordingly, there is no reason not to take information into account in the arbitrator's valuation exercise only because it was not available to the previous adjudicators in that proceeding.

6.64. We also discern no way in which considering events which occurred after the reference period in any way disturbs any findings of the compliance panel regarding either significant lost sales or threatened impedance. In our view, facts pertaining to events that would have occurred after the placement of the relevant LCA order (whether that order was the basis for the finding of significant lost sales or threat of impedance), including facts that arose after the reference period (e.g. cancellation of a delivery) could have a bearing on the ultimate value realized by Airbus from

²¹² Moreover, there appeared to have been at least one sales campaign submitted by the European Union in which the order occurred in the fourth quarter of 2012. (*US – Large Civil Aircraft (21.5 – EU)*, EU First Written Submission, 28 March 2013 (Exhibit EU-51 (HSBI)), para. 1694)

²¹³ The European Union has, for instance, adduced evidence to show that one delivery associated with the 2014 Fly Dubai sales campaign was cancelled due to airline-specific post-order decisions and actions and therefore, this delivery should be valued at zero. (European Union's written submission, para. 216; and response to Arbitrator question No. 61, para. 157. See also European Union's methodology paper, fn 16 (noting that the "the EU quantification relies on the most recent data") The United States has also accounted for the cancellation of one delivery associated with the 2014 Fly Dubai sales campaign in calculating the value of this lost sale. (Expected Value of the 2014 Fly Dubai Lost Sale in Order Year Dollars (Revised) (Exhibit USA-59 (HSBI))) Additionally, the United States has adjusted its calculation of the [[***]] lost sale to account for a [[***]] associated with this sales campaign. (United States' comments on the European Union's response to Arbitrator question No. 85, para. 214; and Expected Value of the [[***]] Lost Sale in Order Year Dollars (Revised) (Exhibit USA-104 (HSBI)))

²¹⁴ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.209.

the counterfactual orders and deliveries by Airbus.²¹⁵ Thus, if there is evidence on the record indicating that the ultimate value realized from a counterfactual order or delivery would have been affected by a subsequent event, we consider it appropriate to take that evidence into consideration in determining the value of the identified lost sale or threatened impeded delivery. Indeed, as the DS316 arbitrator recognized, not taking such evidence into account could result in the complaining party being granted countermeasures in response to a quantum of determined adverse effects that it would not have suffered in the counterfactual and would not be in keeping with Article 7.10.²¹⁶

6.65. Finally, we emphasize that, insofar as we take into account evidence that was not available during the reference period, we do so in order to place as accurate a value as reasonably possible on the adverse effects identified in the compliance proceedings, and not to alter adverse effects already found to exist in the compliance proceedings or to establish any additional adverse effects. Indeed, in our assessment we take into account evidence, including post-reference period evidence, only insofar as it sheds light on how we should quantify the adverse effects determined to exist, and thus assist us in determining a level of countermeasures that is commensurate with the degree and nature of those adverse effects.

6.4.5 Conceptual issues regarding the valuations of significant lost sales and threat of impedance

6.66. We next examine certain conceptual issues raised by the European Union's proposed methodology. In so doing, we first examine the concept of annualization, a tool the use of which both parties agree is necessary in order to determine a maximum level of Annual Suspension that is commensurate with the degree and nature of the adverse effects determined to exist. Second and third, we consider whether the European Union's proposed general methodologies to value the findings of significant lost sales and threat of impedance are consistent with our mandate.

6.4.5.1 Annualization

6.67. It will be recalled that in section 6.4.2 above, we accepted the European Union's request that the countermeasures be structured in the form of Annual Suspension, i.e. setting one maximum level of countermeasures that the European Union may take per year until the authorization to take such countermeasures lapses. The United States did not contest that countermeasures be granted in the form of Annual Suspension, and both parties calculate proposed levels of countermeasures with this structure in mind. Against this background, both parties agree that the maximum level of Annual Suspension is not the total aggregate value of the adverse effects determined to exist, but, rather, the *annualized* value of the adverse effects determined to exist (i.e. the value of the adverse effects determined to exist divided by the relevant number of months and multiplied by 12). As discussed in later sections, however, the parties disagree as to the period of time over which to annualize the value of certain adverse effects. We therefore consider it appropriate at this stage to elucidate our understanding of annualization, which will assist us in selecting appropriate annualization periods in subsequent sections.

6.68. Our understanding of the function, and propriety, of annualization arises from our mandate. Article 7.10 of the SCM Agreement requires that the level of countermeasures be *commensurate* with the *degree and nature* of the adverse effects determined to exist. The term "commensurate" indicates a "relationship of correspondence and proportionality between the two elements", which may be "qualitative as well as quantitative".²¹⁷ It will further be recalled that the purpose of countermeasures is to induce compliance, and, more concretely, to enable a complaining Member

²¹⁵ Panel Report, *EC and certain member States – Large Civil Aircraft*, para. 7.1724 (explaining that there are "many factors that can intervene between order and actual delivery" that affect the ultimate value realized from an order); and Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.105 (noting that "post-order developments may affect the ultimate value that an LCA manufacturer realizes from an LCA order. These include cancellations, delivery delays, or even re-negotiations of the terms of the sale. Such factors can be taken into account when assessing what ultimate value {the LCA manufacturer} would have realized had it won the lost sales.").

²¹⁶ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.214. By the same token, we consider that not taking such evidence into account might result in some cases in the complaining party being granted countermeasures that are underinclusive of the economic harm resulting from adverse effects determined to exist.

²¹⁷ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 5.4. (internal quotation marks and citation omitted)

to inflict economic harm on the respondent to induce such compliance. Therefore, we observe that, under our mandate, there should be a "relationship of correspondence and proportionality" between the maximum level of Annual Suspension and the *annualized* value of the adverse effects determined to exist. In other words, the maximum level of Annual Suspension should be "commensurate with" the economic impact of the adverse effects determined to exist over one year as valued by the Arbitrator.

6.69. We note that this approach accords with previous arbitrator practice. In particular, arbitrators that have fashioned maximum levels of Annual Suspension have done so with reference to the period over which relevant economic effects of measures being valued occurred, including both previous arbitrators acting under Article 7.10 of the SCM Agreement.²¹⁸

6.70. We therefore conclude that, in this proceeding, the choice of an appropriate period of annualization should be made with reference to a period over which the economic harm being measured occurred.

6.4.5.2 Lost sales

6.71. As previously noted, the European Union proposes to value the significant lost sales of single-aisle LCA that occurred in the post-implementation period, i.e. the 2013 Air Canada lost sale, the 2013 Icelandair lost sale and the 2014 Fly Dubai lost sale, by discounting back to the date of the relevant LCA order the net delivery-date prices of the total number of Airbus LCA that would have been delivered in the counterfactual had Airbus won the order. After expressing the discounted values in 2015 US dollars, the European Union then annualizes those valuations over the 33-month period that the European Union argues is the compliance panel's reference period.²¹⁹

6.72. The net delivery-date price of an LCA can be understood generally as the price that the customer ultimately pays by the time it takes delivery of the aircraft. It represents the net aircraft price agreed between the customer and LCA manufacturer on the date of the purchase agreement. The net aircraft price is the price the customer would pay if it were to take delivery of the aircraft on the date that it orders the aircraft. The net delivery-date price is the net aircraft price as adjusted for increases in the costs of labour and materials through negotiated price escalation formulae. This adjustment is necessary given that the actual delivery will occur sometime after the date of the order (in some cases, several years).²²⁰

6.73. We recall that, as in the DS316 proceedings, the lost sales were determined to exist in both the original and compliance proceedings on the basis that a lost sale of LCA occurs at the time of the LCA order.²²¹ The valuation of a lost sale at the time of the order is the value to the LCA manufacturer of the expected future cash flows from the eventual delivery of all LCA that the LCA manufacturer would have delivered if it had obtained the order. In this proceeding, the significant lost sales that occurred in the reference period involved firm orders for 163 Boeing single-aisle LCA that were to be delivered over a time horizon that extended beyond the reference period. However, because a lost sale occurs at the time of the order, the valuation of a lost sale occurring in the reference period is a valuation, as of the time of the order, of Airbus' expected future cash flows from the deliveries of all of the LCA that are part of that lost sale, which Airbus would have made if

²¹⁸ Decisions by the Arbitrators, *US – Anti-Dumping Methodologies (China)* (Article 22.6 – US); *EC and certain member States – Large Civil Aircraft* (Article 22.6 – EU); *US – Tuna II (Mexico)* (Article 22.6 – US); *US – COOL* (Article 22.6 – United States); *US – Upland Cotton* (Article 22.6 – US II); *US – Gambling* (Article 22.6 – US); *EC – Bananas III (Ecuador)* (Article 22.6 – EC); *EC – Hormones (Canada)* (Article 22.6 – EC); *EC – Hormones (US)* (Article 22.6 – EC); and *EC – Bananas III (US)* (Article 22.6 – EC). See also *Brazil – Aircraft* (Article 22.6 – Brazil) where, after determining the present value of the prohibited subsidy granted over a six-year period (2000-2005), the arbitrator divided that aggregate amount by six (for the time-period of six years) to determine the average annualized present value of the subsidy. (Decision by the Arbitrator, *Brazil – Aircraft* (Article 22.6 – Brazil), para. 3.93)

²¹⁹ See section 6.1 above.

²²⁰ See Panel Reports, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), fns 2723 and 3383; and *EC and certain member States – Large Civil Aircraft*, para. 7.1719 and fn 5199.

²²¹ See Appellate Body Reports, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 5.338 (explaining that the existence of lost sales may be identified using "order data alone"); *EC and certain member States – Large Civil Aircraft* (Article 21.5 – US), paras. 5.716 and 5.731 (stating that the five relevant orders for Airbus LCA in the 2011-2013 reference period "represent" the lost sales); *US – Large Civil Aircraft (2nd complaint)*, para. 1230; and *EC and certain member States – Large Civil Aircraft*, para. 1217 (noting that "an assessment of lost sales focused on an examination of specific sales campaigns may be appropriate").

it had won the sale. We further observe that the compliance panel identified the occurrence of the relevant lost sales (i.e. the economic events that we value in this context) in the post-implementation period over a particular temporal period, i.e. the reference period.²²²

6.74. We thus consider that the European Union's general methodology for valuing the significant lost sales in this proceeding, i.e. discounting back to the date of order the net delivery-date prices of all of the Airbus LCA that would have been delivered in the counterfactual for each lost sale, and then annualizing such values over the reference period, is consistent with our mandate. That is, it will yield a maximum level of Annual Suspension that is commensurate with the degree and nature of the lost sales determined to exist in the compliance proceedings.²²³ This methodology is also consistent with the methodology proposed by the United States in the DS316 arbitration proceeding and adopted by the DS316 arbitrator to value the significant lost sales in that proceeding.²²⁴

6.4.5.3 Threat of impedance

6.4.5.3.1 Primary EU methodology based on the value of the underlying lost sales

6.75. In its methodology paper, the European Union originally proposed separate valuation methodologies for the threatened impedance in the US and UAE geographic markets. However, in the light of the United States' written submission, the European Union subsequently proposed, in its written submission and in subsequent submissions, that the Arbitrator value the threatened impedance in both the US and UAE geographic markets using a so-called "lost sales" approach.²²⁵ We therefore consider the lost sales approach to be the primary methodology proposed by the European Union for valuing the threatened impedance.²²⁶

6.76. The European Union considers that a lost sales valuation approach is appropriate in the circumstances because the threat of impedance findings in respect of both the US and UAE geographic markets were specifically based on intermediate findings of lost sales, namely, the 2011 Delta Airlines lost sale (with respect to the US geographic market) and the 2008 and 2014 Fly Dubai lost sales (with respect to the UAE geographic market).

6.77. Under its lost sales approach, the European Union values the threat of impedance in the US and UAE markets, based on the 2011 Delta Airlines and 2008 Fly Dubai lost sales, respectively, in the same way that it values the significant lost sales findings in respect of the three lost sales that occurred in the post-implementation period (2013 Icelandair, 2013 Air Canada and 2014 Fly Dubai).²²⁷ Accordingly, the European Union calculates the net delivery-date prices of all of the Airbus LCA that would have been delivered in the counterfactual in the 2011 Delta Airlines and 2008 Fly Dubai campaigns, had Airbus rather than Boeing won those sales campaigns, and discounts those values back to the relevant order date to arrive at the expected value of those lost sales at the time of the order. After restating the valuations in 2015 US dollars, the European Union annualizes those

²²² The reference period is discussed in section 6.4.3 above.

²²³ See section 6.4.7.3 below (further explaining the annualization issue in the context of lost sales).

²²⁴ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, paras. 6.159 and 6.200, and section 6.3.3.2.1.

²²⁵ The European Union considers that the parties agree that the threat of impedance in the US market is best valued following the same approach applied to the significant lost sales findings, and that it "does not object" to the United States' proposal to apply a "lost sales" approach to valuing threat of impedance in the UAE market. (European Union's written submission, paras. 250, 283, and 390 (second bullet point); opening statement, para. 14; but see response to Arbitrator question No. 85, para. 458 (third bullet point). See also European Union's executive summary, para. 35)

²²⁶ "Since the Parties agree that it is appropriate to adopt a "lost sales" approach to value the threat of impedance findings, the {Arbitrator} should adopt that approach". (European Union's response to Arbitrator question No. 30, para. 120)

²²⁷ The European Union values the threat of impedance in the US geographic market on the basis of the 2011 Delta Airlines lost sale and the threat of impedance in the UAE geographic market on the basis of the 2008 Fly Dubai lost sale (and not additionally on the basis of the 2014 Fly Dubai lost sale). (European Union's response to Arbitrator question No. 34, para. 132) The European Union acknowledges that, under a lost sales approach, the adverse effects of the 2014 Fly Dubai lost sale are already valued as a significant lost sale. (European Union's written submission, para. 400 (first bullet point); response to Arbitrator question No. 31, para. 131; and opening statement, para. 14)

valuations over the 33-month period that the European Union argues is the compliance panel's reference period.²²⁸

6.78. The United States considers that it is appropriate to value the specific threat of impedance findings in the compliance proceedings based on the lost sales underlying those findings. However, it argues that annualizing those values over the compliance panel's reference period (whether 33 months or 36 months), instead of over the 105 months over which all five of the lost sales underpinning the adverse effects findings occurred, *contradicts* the compliance panel's findings.²²⁹ The United States notes in this regard that the 2011 Delta Airlines and 2008 Fly Dubai campaigns were not found to support a finding of significant lost sales because the orders did not occur in the post-implementation period, and contends that to value the threat of impedance related to Airbus' loss of those sales as though they had been significant lost sales that occurred in the reference period "wipes away the temporal distinction" that led the compliance panel to find two different forms of adverse effects.²³⁰

6.79. The European Union rejects the argument that valuing the threat of impedance findings based on the underlying lost sales, and annualizing the values over the compliance panel's reference period, would not be consistent with Articles 7.9 and 7.10 of the SCM Agreement. It contends that it is "perfectly possible" that a threat of impedance valuation would result in the same level of countermeasures as the valuation of a lost sale in the post-implementation period. Specifically, with respect to the 2011 Delta Airlines lost sale, the European Union argues that:

"As a matter of law, that the same underlying transaction (i.e. the 2011 Delta Airlines lost sale) results in the same value of countermeasures, whether it is characterized as (i) a "lost sale" arising in the compliance reference period (if it would actually have arisen in the reference period) or (ii) as a threat of impedance arising in the reference period, does not turn that valuation methodology into one that would be "inconsistent" with Articles 7.10 and 7.9 of the SCM Agreement."²³¹

6.80. Moreover, the European Union notes that in fact, all of the 2011 Delta Airlines deliveries were outstanding at the beginning of the compliance panel's reference period. In this situation, the European Union considers it "perfectly logical" that the very *same* phenomenon results in the *same* level of harm, irrespective of whether it is characterized as (a) a threat of impedance in the reference period, or (b) a lost sale in the reference period (if it would have occurred in the reference period)".²³²

6.81. The parties both propose that the Arbitrator approach the valuation of the compliance panel's reference period from the perspective of the underlying lost sales as the first step. In other words, the parties agree that all of the deliveries associated with the underlying orders, regardless of when

²²⁸ European Union's written submission, paras. 399-400; and response to Arbitrator question No. 35, paras. 134-136; and No. 36, paras. 140-149.

²²⁹ United States' written submission, paras. 104-106.

²³⁰ United States' comments on the European Union's response to Arbitrator question No. 71, para. 163. See para. 6.97 below for the United States' argument regarding the temporal distinction between present and threatened serious prejudice.

²³¹ European Union's response to Arbitrator question No. 71, para. 339 (emphasis original). See also European Union's comments on the United States' response to Arbitrator question No. 70, paras. 339 and 342.

²³² European Union's comments on the United States' response to Arbitrator question No. 70, para. 342. (emphasis original) See also European Union's response to Arbitrator question No. 71, para. 340. The European Union does not address the issue that its proposed lost sales approach would result in a valuation of threat of impedance that is the same as the valuation of a finding of significant lost sales in the post-implementation period specifically with respect to the UAE geographic market, even where deliveries from the 2008 Fly Dubai campaign would have been made prior to the end of the implementation period. Rather, in fn 437 to its comments on the United States' response to Arbitrator question No. 71, the European Union states that any apparent concern that the European Union's lost sales approach would result in the same annualized valuation of threat of impedance for the 2011 and 2008 lost sales that would result from a valuation of those particular lost sales as significant lost sales that occurred in the post-implementation period would not arise under a different approach, namely a "threat of impedance" approach as subsequently proposed by the European Union. The European Union's subsequently proposed "threat of impedance" approach is discussed further in section 6.4.5.3.3 below, along with the conditions to which the European Union subjects its agreement to a valuation on that basis.

those deliveries occurred, would be part of the valuation.²³³ However, they disagree on the second step of the valuation, which is the time-period over which the resulting valuation should be allocated to provide an *annualized* value of the threat of impedance that was found to exist in the compliance panel's reference period.

6.82. Our mandate under Article 7.10 of the SCM Agreement requires that a maximum level of Annual Suspension is commensurate with the *nature* of the adverse effects determined to exist. As explained in section 6.4.5.2, lost sales occur at the time of the order for LCA. The valuation of a lost sale is thus order-centric, focusing on the value of the order logically at the time that the order occurred. By contrast, impedance refers to a phenomenon in which the imports or exports of the like product of the complaining Member would have expanded had they not been obstructed or hindered by the subsidized product, or did not materialize at all because production was held back by the subsidized product.²³⁴ In the context of the LCA industry, imports and exports of LCA are synonymous with *deliveries* of LCA to customers.²³⁵ The valuation of impedance is therefore focused on the value of a *delivery* logically at the time that the delivery occurred.²³⁶

6.83. We consider that a valuation of a threat of *impedance* that is based on the valuation of the underlying lost sales, as lost sales, is inconsistent with the nature of impedance as a market phenomenon focused on the deliveries of LCA at the time that the deliveries occurred.²³⁷ Simply stated, a lost sales approach values a threat of impedance on the basis of the wrong event (the LCA order rather than the deliveries that result from the order) occurring at the wrong time (time of the LCA order rather than the times at which the deliveries occur). We are aware that the compliance panel's specific threat of impedance findings were dependent on findings of underlying lost sales. However, this fact does not, in our view, mean that it is reasonable to value the adverse effect of threat of impedance (concerning deliveries of LCA) as though it were the adverse effect of lost sales (concerning the loss of an LCA order). Moreover, in reaching this conclusion, we acknowledge that the value of an LCA order ultimately may be derived from delivery prices. But to obtain that order value one still must temporally adjust those prices to, and aggregate them at, the time of order. That coordinated temporal adjustment and associated aggregation make no sense if one focuses on the deliveries themselves as independent of the time of the associated order. We further see no basis to use a lost sales approach as some kind of acceptable alternate technical approach for the value of the deliveries at the time of delivery.²³⁸

²³³ European Union's response to Arbitrator question No. 30, para. 123; and United States' response to Arbitrator question No. 30, para. 88. A lost sales valuation approach would therefore include the values of LCA orders in respect of counterfactual deliveries that would be made before, during, and after the reference period.

²³⁴ Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 9.419 (referring to Appellate Body Reports, *EC and certain member States – Large Civil Aircraft*, para. 1161; *US – Large Civil Aircraft (2nd complaint)*, paras. 1071 and 1086).

²³⁵ In the DS316 compliance proceedings, the compliance panel's findings of displacement and/or impedance were based on delivery data. (Panel Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, para. 6.1805 and tables 20, 21 and 22) Similarly, the original panel in this dispute stated that the existence of displacement and impedance can only be definitively established by relevant delivery data (Panel Report, *US – Large Civil Aircraft (2nd complaint)*, para. 7.1686) and the compliance panel examined the existence of displacement, impedance and threats thereof based on market share information showing actual and projected deliveries of LCA (Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 9.432).

²³⁶ Accordingly, in the DS316 arbitration proceeding, the arbitrator valued adverse effects in the form of impedance in the December 2011-2013 reference period based on a "delivery-centric approach" focused on the value of the counterfactual *deliveries* made in the relevant geographic market in the 25-month reference period. "{W}e agree with the parties and temporally assign the economic value of the six instances of impedance, and more concretely the value of the corresponding counterfactual Boeing LCA deliveries to the relevant geographic markets, to the 2011-2013 reference period, during which the deliveries would have occurred". (Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.117 and section 6.4.3)

²³⁷ We note in this regard that the relevant adverse effect that was determined to exist in the post-implementation period is threat of *impedance*, not the intermediate lost sales, which occurred before the beginning of the post-implementation period.

²³⁸ In this regard, we recall the European Union's argument that "{t}here is no basis for reducing the economic harm caused by the *same* transaction, because it constitutes a threat of impedance in the compliance reference period and a lost sale *prior* to the compliance panel reference period". (European Union's response to Arbitrator question No. 71, para. 341 (emphasis original)) The European Union's framing of this

6.84. We therefore reject the European Union's proposal to value the threat of impedance using a lost sales approach. This being so, we next consider, as alternatives, the valuation methodologies that the European Union had originally proposed in its methodology paper.

6.4.5.3.2 Alternative EU methodologies based on the value of deliveries

6.85. As noted previously, in its methodology paper, the European Union proposed separate approaches for valuing the threat of impedance in the US geographic market, and the UAE geographic market. For the US geographic market (based on the 2011 Delta Airlines lost sale), the European Union proposed that the Arbitrator value all of the counterfactual *deliveries* of the relevant Airbus LCA that would have been made if Airbus had secured the order (regardless of whether those deliveries occurred in the implementation period, during the compliance panel's reference period, or in the post-reference period), and that the value be annualized over the compliance panel's reference period.²³⁹

6.86. For the UAE geographic market, the European Union's valuation was based on the delivery prices of all single-aisle LCA that Airbus would deliver into that market from the present day (2020) until 2030, assuming a counterfactual Airbus market share of 100%. The European Union's use of a counterfactual Airbus market share of 100% from 2020 to 2030 was based on the compliance panel's conclusion from the evidence before it that, in both the 2009-2016 period and the "post-2016" period, Airbus would have 100% of the deliveries in the UAE market.²⁴⁰ In its methodology paper, the European Union updated the projected delivery information for scheduled single-aisle deliveries into the UAE market between 2017 and 2030 (including deliveries based on new orders in a sales campaign that occurred after the September 2015 evidentiary cut-off in the compliance proceedings). It then calculated, on the basis of the updated projected delivery information, the number of additional aircraft that Airbus would have delivered over this period, assuming it were to maintain the 100% market share to which the compliance panel referred.²⁴¹

6.87. The European Union selected 2020 as the first year from which to measure the threatened impedance on the basis that 2020 would be the first year in which it would be authorized to implement countermeasures, and was therefore "an appropriate point of departure to quantify the average annual value of deliveries that Airbus could have expected to make in the absence of the US subsidies to Boeing."²⁴² The European Union annualized the value of the corresponding number of counterfactual Airbus deliveries expected from 2020-2030 over an 11-year period, "to reflect the number of years in the period spanning 2020-2030."²⁴³

6.88. The United States responded to the European Union's original valuation methodologies for the threat of impedance findings by proposing, as previously noted in section 6.4.5.3.1, that the

argument already assumes that the economic harm that is characterized under Articles 5(c) and 6.3 as a threat of impedance in the post-implementation period is the same as the economic harm that is characterized as a lost sale prior to the post-implementation period. However, there is no reason why this should necessarily be the case – even where all deliveries may be outstanding at the beginning of the post-implementation period. Rather, the legal characterization of the economic harm (rather than the underlying transaction) dictates the nature and extent of this economic harm that an arbitrator must value under Article 7.10 of the SCM Agreement. Our valuation of the adverse effects determined to exist must be based on the degree and nature of the effects that the compliance panel identified, even if those effects relate to a common underlying transaction. Indeed, under the delivery-centric approach that we consider would yield countermeasures commensurate with the degree and nature of the threat of impedance identified in the compliance proceedings (discussed in section 6.4.9.2 below), we calculate valuations for threat of impedance that do not coincide with either of the parties' valuations under an order-centric approach. We would add that the fact that different forms of adverse effects may give rise to different valuations, notwithstanding that they are based on the same underlying transaction does not mean that a threat of impedance is necessarily a "second-class adverse effect", compared with a lost sale. (See European Union's comments on the United States' response to Arbitrator question No. 71, para. 341)

²³⁹ The European Union explains that it calculates the net price of each Airbus LCA that would have been delivered if Airbus had won the sale, at delivery (i.e. Net Fly-Away Price adjusted according to the contractual escalation formula to determine 2013-2019 delivery prices, which are then time-adjusted into April 2020 dollars (using the ALII for the relevant delivery months and years), and annualized over a 33-month reference period). (See European Union's methodology paper, paras. 132-140)

²⁴⁰ European Union's methodology paper, paras. 144-145; and written submission, para. 285.

²⁴¹ European Union's methodology paper, paras. 148-149 and table 7.

²⁴² European Union's methodology paper, para. 150.

²⁴³ European Union's methodology paper, paras. 152 and 159.

underlying lost sales be valued on the same basis as the three significant lost sales that occurred in the post-implementation period. However, as previously mentioned, the United States' proposal also required that the period over which those values would then be divided, to arrive at an annualized value of the threat of impedance that was found to exist in the compliance panel's reference period, must reflect the total period over which all five of the lost sales occurred, i.e. 2007-2015 (105 months) rather than the compliance panel's reference period, as proposed by the European Union.²⁴⁴

6.89. As regards the US geographic market in particular, the United States noted that many of the deliveries of LCA pursuant to the 2011 Delta Airlines lost sale were made during the compliance panel's reference period. According to the United States, any valuation of threat of impedance based on the relevant deliveries, as opposed to lost sales, would therefore need to exclude deliveries that were made during the implementation period and compliance panel reference period. This is because such deliveries would be, at most, evidence of *present* impedance, rather than threat of impedance.²⁴⁵

6.90. As regards the UAE geographic market, the United States argued that the European Union's counterfactual delivery numbers are based on (a) deliveries associated with the 2014 Fly Dubai lost sale, which were already valued as part of the valuation of significant lost sales and could not be counted again, and (b) a 2017 Fly Dubai single-aisle sales campaign that Boeing won, which occurred after the compliance proceedings, and was not subject to any findings in the compliance proceedings.²⁴⁶ The United States argued that the findings from the compliance proceedings did not support the assumption that, absent the Washington State B&O tax rate reduction, Airbus would retain 100% of the counterfactual UAE market share from 2009 throughout the post-implementation period, such that the 2017 Fly Dubai sales campaign could implicitly be assumed to be a lost sale attributable to the Washington State B&O tax rate reduction.²⁴⁷

6.91. The valuation methodology originally proposed by the European Union for the threat of impedance in the US geographic market (a) values all of the LCA deliveries associated with the 2011 Delta Airlines lost sale, regardless of whether the deliveries in question occurred during the compliance panel's reference period or after, and (b) annualizes the resulting valuation over the compliance panel's reference period.²⁴⁸ We observe that this methodology displays characteristics similar to those that it later proposed in its "threat of impedance" valuation approach, which we evaluate in detail further below.²⁴⁹ We therefore consider that our evaluation of the European Union's threat of impedance valuation approach will effectively resolve the propriety of this approach as well.²⁵⁰

6.92. The valuation methodology originally proposed by the European Union for the threat of impedance in the UAE geographic market focuses on the value of deliveries at the time the deliveries occurred (rather than the value of the order that resulted in the deliveries at the time the order occurred). In that respect, it accords with the nature of adverse effects in the form of threat of impedance. However, the European Union's quantification of the relevant counterfactual deliveries is based in part on deliveries made under a 2017 Fly Dubai sales campaign that was not one of the five price-sensitive LCA sales campaigns that were found to be lost by Airbus due to the Washington State B&O tax rate reduction. We recall that the compliance panel's threat of impedance findings were dependent on the existence of a causal connection between the subsidy and threatened

²⁴⁴ United States' written submission, paras. 105-106.

²⁴⁵ United States' written submission, para. 148 at fn 171.

²⁴⁶ United States' written submission, paras. 148-151. The European Union rejects the argument that its methodology would involve an improper "double counting" of deliveries related to the 2014 Fly Dubai lost sale, arguing that the compliance panel found that the 2014 Fly Dubai lost sale and threat of impedance in the UAE market were "distinct adverse effects" that the Arbitrator must value separately. (European Union's written submission, para. 286 at fn 389) In addition, the European Union argues that the compliance panel's findings were based on evidence of market share trends in the UAE market (and not only on the evidence of the 2008 and 2014 lost sales), such that the proposed valuation approach for the UAE market is supported by the SCM Agreement. (European Union's written submission, paras. 285-286)

²⁴⁷ United States' written submission, paras. 153-156.

²⁴⁸ European Union's methodology paper, para. 130. The main difference is that, unlike the significant lost sales valuations, the European Union does not propose discounting the delivery-date prices back to their equivalent values at the date of the order, but rather, adjusts them forward to their equivalent value in April 2020. (European Union's methodology paper, para. 137)

²⁴⁹ See para. 6.93 et seq.

²⁵⁰ See fn 330 below.

impedance.²⁵¹ The only causal connection identified by the compliance panel was the lost-sales findings for those specific price-sensitive campaigns.²⁵² The 2017 Fly Dubai sales campaign was not before the compliance panel because it occurred subsequent to the compliance panel's evidentiary cut-off of September 2015 and therefore was not identified as a "price-sensitive sales campaign" or as a lost sale that was the effect of US subsidies. We therefore do not consider that there is a basis on which the Arbitrator can value deliveries associated with the 2017 Fly Dubai sales campaign as part of the compliance panel's threat of impedance findings for the UAE geographic market. Therefore, we cannot accept the European Union's proposed alternative methodology for valuing the threat of impedance finding in the UAE market, but as was the case with respect to the proposed alternative methodology for the US market, we discern certain aspects of the methodology that are similar to the so-called "delivery-centric" approach that we discuss next.

6.4.5.3.3 Arbitrator's proposed "delivery-centric" approach

6.93. Following the meeting with the parties, the Arbitrator invited the parties to propose methodologies to value the threat of impedance based on the value of the counterfactual deliveries stemming from the two lost sales at the time of delivery, which it referred to as a "delivery-centric" approach.²⁵³

6.94. The European Union responded that it would agree to the Arbitrator valuing a threat of impedance (that is, a threat of deliveries) *arising at any point in the compliance panel's reference period* even if any of those LCA were subsequently delivered in the reference period and having regard to the value of deliveries scheduled to occur in the post-reference period.²⁵⁴ However, it specified that the time-period over which the resulting value of threatened deliveries would be annualized must be the "33-month reference period adopted by the compliance adjudicators".²⁵⁵

6.95. The European Union argues that the compliance panel's findings of threat of impedance in the US and UAE markets were temporally situated at and from the time of the lost sales (occurring in 2011 and 2008, respectively) and that the threat of impedance *arose and continued to exist* in the reference period.²⁵⁶ The European Union therefore argues that the correct temporal perspective, and

²⁵¹ Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, paras. 9.427-9.432.

²⁵² We therefore disagree with the European Union's assertion that the compliance panel's *causal* analysis for the UAE market was not based entirely on the prior lost-sales findings, but also on market share trends (see European Union's written submission, para. 285). See also para. 6.126 below.

²⁵³ See e.g. Arbitrator question Nos. 66, 69, and 70.

²⁵⁴ European Union's response to Arbitrator question No. 67, para. 286. The European Union considers that the term "delivery-centric" does not properly characterize the alternative to a lost sales approach because it wrongly suggests that the Arbitrator would value a finding of "actual" impedance, whereas it must value the *threat of* impedance findings. The European Union therefore refers to its proposed alternative to a lost sales approach as a "threat of impedance" approach (European Union's response to Arbitrator question No. 66, paras. 188-189); compare with European Union's comments on the United States' response to Arbitrator question No. 66, para. 215 where the European Union refers to its approach as a "threat of delivery" approach.

²⁵⁵ European Union's response to Arbitrator question No. 66, paras. 236 and 239. As noted in para. 6.102 below, the European Union's agreement to the Arbitrator adopting a "threat of impedance" valuation approach is expressly subject to certain conditions, one of which is that the annualization period is 33 months.

²⁵⁶ For example, for the US market (2011 Delta Airlines), the European Union argues:

It is important to note that the compliance adjudicators' precise finding is one of a threat of impedance resulting from the 25 August 2011 Delta Airline order for 100 aircraft. ... That threat of impedance, which came into existence on 25 August 2011, continued to exist at least until such time as the aircraft were delivered. In the first part of the reference period, from 1 January 2013 to the date of first delivery (September 2013), a threat of impedance covering all of those threatened deliveries was extant.

European Union's response to Arbitrator question No. 66, para. 199. See also response to Arbitrator question No. 67, paras. 307-308; and combined comments on the United States' responses to Arbitrator question Nos. 66(a) and 69, para. 233. For the UAE market (2008 Fly Dubai), the European Union argues:

As in the case of the US market, the correct temporal viewpoint, and the one adopted by the compliance panel, was also, by definition, the date on which the 2008 Fly Dubai transaction was concluded (14 July 2008) (bringing the threat of impedance into existence) and thus, insofar as is legally relevant, the start of the reference period (1 January 2013), when a threat of impedance continued to exist. Again, the compliance panel did *not* situate itself at the end of the reference period (30 September 2015) to consider whether there was a threat arising in the reference period (1 January 2013 to 30 September 2015) due to deliveries that were "clearly

the one adopted by the compliance panel, is that the threat of impedance "arose" on the date the relevant order was lost and "remained extant, in its entirety, in the reference period".²⁵⁷ From that perspective, the threat of impedance that existed in the reference period comprised all future deliveries that were undelivered at any point in the reference period, and therefore, the appropriate annualization period for the threat of impedance would be the reference period.

6.96. The United States argues that, under a delivery-centric approach to valuing threat of impedance, the Arbitrator should (a) include only those deliveries occurring *after* the end of the compliance panel's reference period²⁵⁸; and (b) annualize the corresponding valuation over the time over which the counterfactual Airbus deliveries would have been scheduled to occur (all being *after* the compliance panel's reference period).

6.97. In support of this position, the United States distinguishes between serious prejudice that arises in the present based on *present* harm, and serious prejudice that arises in the present based on *threatened* harm in the imminent and clearly foreseeable future.²⁵⁹ The United States argues that threat findings are based on future, imminent harm that has not yet materialized.²⁶⁰ For the United States, it therefore follows that a threat of serious prejudice finding does not include a finding of the present form of that serious prejudice; rather, threat findings are made when there are no current, ongoing adverse effects in the relevant form.²⁶¹ The United States considers that deliveries made during the compliance panel's reference period would be the basis for a finding of *present* impedance, which the compliance panel did not make in this case.²⁶² According to the United States, had there been a finding of present impedance, there would be no question that the Arbitrator's valuation of that finding should be limited to counterfactual deliveries *during* the reference period. Likewise, there should be no question that the valuation of threat of impedance findings should be limited to counterfactual deliveries occurring *after* the reference period.²⁶³

6.98. The United States also contrasts the findings before this Arbitrator with the findings before the DS316 arbitrator. It notes that in the DS316 compliance proceedings, the compliance panel found present impedance based on deliveries that occurred during the compliance proceedings reference period (but not threat of impedance as regards deliveries due to occur after the end of the reference period).²⁶⁴ The DS316 arbitrator valued those reference-period deliveries as *present* impedance and did not value any future deliveries scheduled to occur after the end of the compliance panel's reference period because there was no threat of impedance finding made in the compliance proceeding.²⁶⁵ The United States notes that in this arbitration proceeding, by contrast, there are no present impedance findings by the compliance panel, only threat of impedance findings. The United States argues that, because there is no finding of present impedance, the Arbitrator should not value any deliveries made during the reference period. The United States submits that, by asking the Arbitrator to value deliveries that occur both in the reference period and in the post-reference period as threat of impedance, the European Union is in reality asking the Arbitrator to treat the

foreseen and imminent" in the post-reference period (i.e. after 30 September 2015). Such an assertion flatly contradicts the findings actually made by the compliance panel.

European Union's response to Arbitrator question No. 66, para. 205. (emphasis original; fn omitted) See also European Union's combined comments on the United States' responses to Arbitrator question Nos. 66(a) and 69, paras. 234 and 250.

²⁵⁷ European Union's response to Arbitrator question No. 66, paras. 200 and 203; response to Arbitrator question No. 67, paras. 299 and 301; and combined comments on the United States' responses to Arbitrator question Nos. 66(a) and 69, para. 231.

²⁵⁸ United States' response to Arbitrator question No. 66, para. 84. The United States explains that this would mean that only the deliveries under the 2011 Delta Airlines and 2008 Fly Dubai campaigns that occurred after the compliance panel's reference period would be included in the valuation. Deliveries under the 2014 Fly Dubai campaigns would have already been valued as part of the 2014 Fly Dubai lost sales valuation and would not be counted twice. (United States' response to Arbitrator question No. 66, para. 86)

²⁵⁹ United States' comments on the European Union's response to Arbitrator question No. 66, para. 111.

²⁶⁰ The United States explains: "Thus, the threat of impedance findings are necessarily forward looking. They are based on a present situation in which Airbus LCA deliveries are not yet being obstructed, hindered or held back, but will imminently undergo a change in circumstances that will result in them being obstructed/hindered/held back *in the future*." (United States' comments on the European Union's response to Arbitrator question No. 66, para. 95 (emphasis original))

²⁶¹ United States' response to Arbitrator question No. 69, para. 108.

²⁶² United States' response to Arbitrator question No. 66, paras. 85 and 87; and response to Arbitrator question No. 69, para. 109.

²⁶³ United States' comments on the European Union's response to Arbitrator question No. 66, para. 98.

²⁶⁴ United States' response to Arbitrator question No. 69, para. 110.

²⁶⁵ United States' response to Arbitrator question No. 69, para. 110.

compliance panel as having found both present impedance *and* threat of impedance, which is clearly erroneous, and would lead to countermeasures that are not commensurate with the degree and nature of adverse effects determined to exist.²⁶⁶

6.99. We begin by observing that, as a factual matter, all of the counterfactual deliveries related to the 2011 Delta Airlines lost sale would have occurred either during or after the compliance panel's reference period. For the 2008 Fly Dubai lost sale, certain counterfactual deliveries would have occurred *prior to* the end of the implementation period, as well as during the reference period. Moreover, where the Boeing delivery schedule is used to identify the delivery schedule of the counterfactual Airbus deliveries, there would have been no post-reference period deliveries for the 2008 Fly Dubai lost sale.

6.100. Neither party disputes that, as part of its valuation of the threat of impedance findings, the Arbitrator should value relevant counterfactual deliveries that would have manifested *after* the reference period.²⁶⁷ The issue we must resolve is whether the Arbitrator's valuation of the threat of impedance findings should *also* include the value of any counterfactual deliveries that would have manifested *in* the reference period (and possibly, those that would have manifested *prior to* the expiration of the implementation period).

6.101. We understand the European Union's legal argument to be that the threat of impedance that "arises" in the reference period comprises all deliveries subsequently made during, as well as after, the reference period.²⁶⁸ In other words, the fact that any of the threatened deliveries of LCA that "arise" in the reference period may subsequently also be delivered in the reference period (and therefore may *also* have constituted present impedance), does not mean that such threatened deliveries should be excluded from the valuation of threat of impedance.²⁶⁹

6.102. The European Union also states that, subject to the fulfilment of the following "conditions" (and only then), it would agree to the Arbitrator excluding from its valuation of threat of impedance in the UAE geographic market the 2008 Fly Dubai deliveries that would have taken place prior to the end of the implementation period²⁷⁰:

- a. That the numerator for the valuation of threat of impedance in each geographic market comprise the "threat of deliveries" occurring during and after the reference period,
- b. That the denominator for each valuation (i.e. the annualization period) is the 33-month reference period, and
- c. That the Arbitrator reject the United States' argument that the valuation of the lost revenues arising from each sales campaign should include a probabilistic adjustment to account for the uncertainty that Airbus would have won each sales campaign in the counterfactual.²⁷¹

6.103. For present purposes²⁷², it is clear that the parties therefore disagree as to:

²⁶⁶ United States' response to Arbitrator question No. 69, para. 112.

²⁶⁷ See e.g. European Union's response to Arbitrator question No. 66, para. 194; and United States' comments on the European Union's response to Arbitrator question No. 66, para. 92. The parties do disagree, however, as to the appropriate time-period over which the resulting values should be annualized.

²⁶⁸ European Union's response to Arbitrator question No. 66, paras. 190-191.

²⁶⁹ See European Union's combined comments on the United States' responses to Arbitrator question Nos. 66(a) and 69, para. 215; and response to Arbitrator question No. 66, para. 231. In that regard, the European Union emphasizes that the Arbitrator's valuation should not be based on a "*fictional* finding of *actual* impedance", but on the adopted threat of impedance findings which concern the threat of deliveries resulting from the 2011 and 2008 lost sales which did "*arise in*" the reference period "and remained extant, in its entirety, in the reference period." (European Union's response to Arbitrator question No. 66, paras. 188-189, 198-200 (emphasis original))

²⁷⁰ European Union's response to Arbitrator question No. 66, paras. 189-193.

²⁷¹ This issue is addressed in section 6.4.6.1 below.

²⁷² In its response to Arbitrator question No. 66, the European Union states that the parties' disagreement concerns the valuation of deliveries that occurred in the reference period as part of the threat of impedance findings. (European Union's response to Arbitrator question No. 66, para. 194) We therefore

- a. whether the Arbitrator should value, as part of the compliance panel's threat of impedance findings, counterfactual deliveries that would have occurred in the reference period, and (closely associated with this)
- b. the appropriate annualization period for valuation of the counterfactual deliveries that comprise the threat of impedance findings.

6.104. The above disagreement, in turn, is based on differing perspectives as to the point in time at which the compliance panel situated itself when making the threat of impedance findings, and more generally, the nature of a *threat* of impedance as a specific form of economic harm.

6.105. The European Union argues that the compliance panel temporally situated itself *at the time of the lost sales* (i.e. in 2011 and 2008, respectively) when finding that those lost sales gave rise to a threat of impedance that "arose" in the reference period.²⁷³ The European Union stresses that it does not argue that the compliance panel adopted a "snapshot of the market situation" on the first day of the reference period.²⁷⁴ Rather, the compliance panel "assessed and established the presence of adverse effects and threat thereof, *arising at any time during* the reference period."²⁷⁵ In other words, the European Union considers that the threat of deliveries "*arising at any time during* the reference period is *part and parcel* of the threat of impedance findings, and must therefore be valued by the {Arbitrator}."²⁷⁶ The United States, by contrast, considers that the compliance panel's threat of impedance findings are forward-looking *as at the time of the finding*, noting that the compliance panel issued its report in December 2016, having considered evidence through to late 2015.²⁷⁷ For

consider that the European Union does not ask the Arbitrator, under a "threat of impedance" approach, to additionally value the threatened deliveries that manifested as deliveries prior to the expiration of the implementation period (i.e. the 2008 Fly Dubai deliveries that occurred prior to the expiration of the implementation period). It is not necessary to determine, from the European Union's submissions, whether the European Union's agreement that the Arbitrator may exclude the 2008 Fly Dubai deliveries that would have taken place prior to the end of the implementation period follows from its legal argument, or is a concession which is conditional on the fulfilment of the three conditions above, or both.

²⁷³ See European Union's response to Arbitrator question No. 66, with respect to the US market: "thus, the correct temporal perspective, and the one adopted by the compliance panel in this particular case, and given the particular basis of the threat of impedance finding, is that the threat of impedance arose on 25 August 2011 and remained extant, in its entirety, in the reference period" (European Union's response to Arbitrator question No. 66, para. 200); "the threat of impedance arose on 25 August 2011 because of the 2011 Delta Airlines transaction and 'will, to that extent, be obstructed, hindered or held back'" (Ibid. para. 201 (emphasis omitted)); and "rather, the compliance panel's findings, by their own terms, establish that the relevant particular point in time was 25 August 2011, when the threat of impedance arose. The findings by the compliance panel addressed the future in relation to that point in time (25 August 2011) and, insofar as is legally relevant, the start of the reference period (1 January 2013)" (Ibid. para. 203). With respect to the UAE market: "as in the case of the US market, the correct temporal viewpoint, and the one adopted by the compliance panel, was also, by definition, the date on which the 2008 Fly Dubai transaction was concluded (14 July 2008) (bringing the threat of impedance into existence) and thus, insofar as is legally relevant, the start of the reference period (1 January 2013), when a threat of impedance continued to exist." (Ibid. para. 205 (emphasis omitted)); "by its own terms, the compliance panel's finding of threat of impedance was grounded, *inter alia*, in the 2008 Fly Dubai transaction on 14 July 2008, which therefore by definition constitutes the relevant temporal viewpoint for that transaction." (Ibid. para. 210). See also European Union's combined comments on the United States' responses to Arbitrator question Nos. 66(a) and 69, para. 231.

²⁷⁴ European Union's combined comments on the United States' responses to Arbitrator question Nos. 66(a) and 69, paras. 235-236. See, however, European Union's response to Arbitrator question No. 66, para. 198 ("At the beginning of the reference period, on 1 January 2013 ... all deliveries related to the 2011 Delta Airlines transaction were still outstanding, and were threatening to impede Airbus LCA imports into the United States"); para. 199 ("In the first part of the reference period, from 1 January 2013 to the date of first delivery (September 2013), a threat of impedance covering all of those threatened deliveries was extant"); para. 203 ("Thus, as a matter of fact and as a matter of law, the {Arbitrator's} valuation exercise must value the threat of impedance that was 'clearly foreseen and imminent' on 1 January 2013"). (emphasis omitted)

²⁷⁵ European Union's comments on the United States' response to Arbitrator question No. 66, para. 236. (emphasis original)

²⁷⁶ European Union's comments on the United States' response to Arbitrator question No. 66, para. 243. (emphasis original)

²⁷⁷ United States' comments on the European Union's response to Arbitrator question No. 68, para. 132, and No. 66, para. 102. The United States argues that threat of impedance findings are based on a present situation in which Airbus LCA deliveries are not yet being obstructed, hindered, or held back, but will imminently undergo a change in circumstances that will result in them being obstructed, hindered, or held back *in the future*. (United States' comments on the European Union's response to Arbitrator question No. 66, para. 95)

the United States, the compliance panel's findings of threat of impedance mean that, at least as of late 2015, impedance had not materialized.²⁷⁸

6.106. The European Union's position suggests that it regards the threat of impedance as the economic harm represented by the *prospect* of impeded deliveries arising out of the 2011 Delta Airlines and 2008 Fly Dubai lost sales, which at the beginning of the reference period "hung over Airbus' head like a mighty wave waiting to crash down upon it".²⁷⁹ The economic harm that the European Union equates with the threat of impedance is, in other words, the harm to Airbus of the overhanging wave of future impeded LCA deliveries, which arose in the reference period, as opposed to the harm to Airbus from the impeded deliveries of Airbus LCA as and when those deliveries would have occurred (i.e. during the reference period, or in the post-reference period). The United States, by contrast, considers the economic harm in the form of a threat of impedance to be the same harm as present impedance, but from a forward-looking standpoint. Thus, for the United States, both present impedance and threat of impedance concern the harm from impeded deliveries of LCA as and when those deliveries occur, the only difference being temporal; i.e. present impedance concerns impeded deliveries that occur in the reference period, while threat of impedance concerns impeded deliveries that occur in the post-reference period.

6.107. We again recall that our mandate under Article 7.10 requires that the level of countermeasures be commensurate with the degree and nature of the adverse effects determined to exist.²⁸⁰ We have already considered the nature of impedance above.²⁸¹ Given our mandate and the fact that the *threat* of impedance is the relevant form of serious prejudice, we further consider it appropriate (and most effective) to evaluate the differing perspectives of the parties as to the nature of a *threat* of impedance as a specific form of economic harm and the point in time at which the compliance panel situated itself when making the threat of impedance findings.

6.108. The analysis that follows thus proceeds in three parts. We first consider the nature of a *threat* of serious prejudice in general, based on a textual analysis of that concept as it appears in footnote 13 to paragraph (c) of Article 5 of the SCM Agreement. We then discuss the findings of the compliance panel, specifically in order to determine whether, as argued by the European Union, the compliance panel temporally situated itself at the time of the respective lost sales in 2011 and 2008 when making its threat of impedance findings. Third, in the light of the first two parts, we explain our conclusions as to whether the Arbitrator's valuation of the threat of impedance findings should include the value of any counterfactual deliveries that would also have manifested in the reference period.

6.4.5.3.3.1 Nature of "threat"

6.109. Article 6.3 of the SCM Agreement is formulated in the present tense ("the effect of the subsidy is") when identifying the specific forms of economic harm that constitute serious prejudice for purposes of Article 5(c), including impedance of imports and exports under Articles 6.3(a) and (b). Footnote 13 to paragraph (c) of Article 5 provides that the term "serious prejudice to the interests of another Member" is used in the SCM Agreement in the same sense as it is used in paragraph 1 of Article XVI of GATT 1994 "and includes threat of serious prejudice".

6.110. Footnote 13 also references Article XVI of the GATT 1994, which states (in Section A):

If any {Member} grants or maintains any subsidy, including any form of income or price support, which operates directly or indirectly to increase exports of any product from, or to reduce imports of any product into, its territory, it shall notify ... in writing of the extent and nature of the subsidization, of the estimated effect of the subsidization on the quantity of the affect product or products imported into or exports from its territory and of the circumstances making the subsidization necessary. *In any case in which it is determined that serious prejudice to the interests of any other {Member} is caused or threatened by any such subsidization*, the {Member} granting the subsidy shall, upon

²⁷⁸ United States' comments on the European Union's response to Arbitrator question No. 68, para. 132.

²⁷⁹ European Union's opening statement, para. 108.

²⁸⁰ See section 3 above.

²⁸¹ See paras. 6.82-6.83 above.

request, discuss with the other {Member} or {Members} concerned, ... the possibility of limiting the subsidization.²⁸²

6.111. The reference to Article XVI of the GATT 1994 in footnote 13, coupled with the present-tense expression of serious prejudice in Article 6.3, indicates that the scope of serious prejudice under the SCM Agreement includes both present and threatened serious prejudice, thereby aligning with Article XVI of the GATT 1994.²⁸³ The SCM Agreement does not define a threat of serious prejudice, nor does it explain the relationship between serious prejudice as delineated in Article 6.3 and threat of serious prejudice, other than as provided in footnote 13.

6.112. A "threat" is ordinarily understood as "an indication of impending evil".²⁸⁴ Something is "impending" when it is "about to fall or happen; hanging over one's head; imminent; or near at hand".²⁸⁵ A threat of impedance, in our view, is therefore a forward-looking concept, i.e. impedance that has not yet occurred but will soon occur.

6.113. Instructive guidance by the Appellate Body accords with this understanding. The Appellate Body has discussed the concept of "threat" in the context of interpreting the phrase "threat of serious injury" in Article 4.1(b) of the Agreement on Safeguards, explaining that "threat" refers to something that "has *not* yet occurred, but remains a future event whose actual materialization cannot, in fact be assured with certainty".²⁸⁶ This understanding of threat as something that has not occurred at the relevant time, but that will occur at a future time is consistent also with the nature of threat of material injury in Article 3.7 of the Anti-Dumping Agreement and Article 15.7 of the SCM Agreement.²⁸⁷ We discern no reason to think that the nature of "threat" in these agreements and the threat of serious prejudice in the SCM Agreement should be interpreted differently.

6.114. Indeed, in *EC and certain member States – Large Civil Aircraft*, the Appellate Body indicated a similar understanding of the term "threat" within the context of threat of serious prejudice in the

²⁸² Emphasis added.

²⁸³ We observe a similar structure as regards the concept of injury in Article 5(a): footnote 11 to paragraph (a) of Article 5 provides that the term "injury to the domestic industry" is used in the same sense as it is used in Part V of the SCM Agreement. Part V (fn 45 to Article 15) provides that, unless otherwise specified, the term "injury" includes both present material injury and a "threat of material injury". The Anti-Dumping Agreement is structured in a similar way, with footnote 9 providing that the term "injury" shall, unless otherwise specified, be taken to mean material injury to a domestic industry, threat of material injury to a domestic industry or material retardation of the establishment of such an industry. Article 10.3 of the Anti-Dumping Agreement (dealing with retroactivity) states that, except as provided in paragraph 2 "where a determination of threat of injury or material retardation is made (but no injury has yet occurred) a definitive anti-dumping duty may be imposed only from the date of the determination of the threat of injury or material retardation", suggesting that threat of injury arises where material injury does not yet exist. The Agreement on Safeguards also separately defines "serious injury" and "threat of serious injury", with "serious injury" meaning a significant overall impairment in the position of a domestic industry while "threat of serious injury" means "serious injury that is clearly imminent in accordance with the provisions of paragraph 2."

²⁸⁴ Oxford Dictionaries online, definition of "threat"
<https://www.oed.com/view/Entry/201152?rskey=wUnlWk&result=1&isAdvanced=false#eid> (accessed 21 September 2020).

²⁸⁵ Oxford Dictionaries online, definition of "impending"
<https://www.oed.com/view/Entry/92216?rskey=nFapJK&result=3&isAdvanced=false#eid> (accessed 21 September 2020).

²⁸⁶ Appellate Body Report, *US – Lamb*, para. 125 (emphasis original). In the context of the Anti-Dumping Agreement, the Appellate Body has explained that, "in terms of the rising continuum of an injurious condition of a domestic industry that ascends from a 'threat of serious injury' up to 'serious injury', we see 'serious injury' – because it is something *beyond* a 'threat' – as necessarily *including* the concept of a 'threat' and exceeding the presence of a 'threat'. (Appellate Body Report, *US – Line Pipe*, para. 170 (emphasis original))

²⁸⁷ Article 3.7 of the Anti-Dumping Agreement provides the basis for a determination of threat of material injury, and a non-exhaustive list of factors that an investigation authority should consider in making this determination. It provides, in relevant part, that the totality of factors considered "must lead to the conclusion that further dumped exports are imminent and that, unless protective action is taken, material injury would occur". The text of Article 15.7 of the SCM Agreement largely parallels that of Article 3.7 of the Anti-Dumping Agreement, without footnote 10 and with the addition of a factor that the investigating authority should consider, namely the nature of the subsidy and the trade effects likely to arise therefrom (Article 15.7(i)). Prior panels have concluded that decisions concerning Article 3.7 of the Anti-Dumping Agreement instruct the understanding of Article 15.7 of the SCM Agreement, and vice-versa. (See Panel Reports, *EC and certain member States – Large Civil Aircraft*, para. 7.2157, *US – Coated Paper (Indonesia)*, para. 7.259)

SCM Agreement. The Appellate Body observed that neither Article 6.3(a) nor Article 6.3(b) expressly refers to "threat of *displacement*". Rather, footnote 13 to Article 5(c) provides that the term "serious prejudice to the interests of another Member" as used in the SCM Agreement "includes threat of serious prejudice".²⁸⁸ The Appellate Body referred to Article 15.7 of the SCM Agreement (concerning a threat of material injury) which it said provided relevant guidance for understanding the concept of threat of serious prejudice in Article 5(c), stating:

Thus, as with a determination of threat of material injury, we consider that it is reasonable to require that the determination of threat of serious prejudice "be based on facts and not merely on allegation, conjecture or remote possibility" and that "{t}he change in circumstances" that *would* create a situation in which the subsidy *would* cause displacement "must be clearly foreseen and imminent."²⁸⁹

6.115. Subsequently, in the original appeal in this dispute, the Appellate Body referred to the above paragraph from its earlier report as acknowledging that, although the word "threat" is not expressly included in the text of Article 6.3(b), a finding under Article 6.3(b) could include situations in which displacement was only threatened.²⁹⁰ The Appellate Body's use of the conditional tense in the above explanation of a threat of serious prejudice, along with the requirement that the change in circumstances that would lead to the existence of displacement must be clearly foreseen and *imminent* in order to demonstrate a threat of displacement, suggests that the Appellate Body understood a threat of displacement as a situation in which displacement did not presently exist but would exist in the future.

6.116. More generally, the present-tense formulation in Article 6.3 of the types of economic harm that constitute serious prejudice, when read with footnote 13 (indicating that serious prejudice includes threat of serious prejudice) suggests that the relationship between present serious prejudice in Article 6.3 and threat of serious prejudice, is temporal. We note that the way in which the Appellate Body has referred to the relationship between threatened and present serious prejudice is consistent with this understanding:

A claim of present serious prejudice relates to the existence of prejudice in the past, and present, and that may continue in the future. By contrast, a claim of threat of serious prejudice relates to prejudice that *does not yet exist*, but is imminent such that it will materialize in the near future. Therefore, a threat of serious prejudice claim does not necessarily capture and provide a remedy with respect to the same scenario as a claim of present serious prejudice.²⁹¹

6.117. We also take note of the Appellate Body's statements when interpreting "threat" in the context of other WTO agreements which are also consistent with the notion that a threat refers to something that has not yet occurred or is not yet in existence.²⁹²

6.118. Finally, we consider the object and purpose of the inclusion of threat of serious prejudice as part of serious prejudice within the meaning of Article 5(c) of the SCM Agreement. Part III of the

²⁸⁸ Appellate Body Report, *EC and certain member States – Large Civil Aircraft*, para. 1171.

²⁸⁹ Appellate Body Report, *EC and certain member States – Large Civil Aircraft*, para. 1171 (emphasis added). The panel in the original proceeding in *EC and certain member States – Large Civil Aircraft* had found a threat of displacement in the Indian market based on an order in 2005 for 225 Airbus LCA compared with 98 Boeing LCA orders which represented a "massive increase in the Indian market" and indicated that "as these LCA are delivered over the ensuing years, it is likely that Airbus will have a significantly greater share of the Indian market than Boeing". (Panel Report, *EC and certain member States – Large Civil Aircraft*, para. 7.1784) The order and delivery data before the panel for that geographic market had covered the period 2001-2006, thus indicating that the panel based its threat of displacement finding on a situation of displacement that would occur in a (future) period i.e. subsequent to 2006. The Appellate Body ultimately overturned the panel's finding of threat of displacement, on the grounds that the trends in market share based on orders did not provide a sufficient basis for a finding of threat of displacement. (Appellate Body Report, *EC and certain member States – Large Civil Aircraft*, para. 1202)

²⁹⁰ Appellate Body Report, *US – Large Civil Aircraft (2nd complaint)*, fn 2215.

²⁹¹ Appellate Body Report, *US – Upland Cotton (Article 21.5 – Brazil)*, para. 244 (emphasis added). In saying that a threat of serious prejudice "does not necessarily capture and provide a remedy with respect to the same scenario as a claim of present serious prejudice", we understand the Appellate Body to mean that a threat of serious prejudice does not necessarily include present serious prejudice, because a threat, by definition, relates to something that does not yet exist.

²⁹² See para. 6.113 above.

SCM Agreement ("Actionable Subsidies") provides that specific subsidies give rise to the remedies in Article 7 *only* where they are demonstrated (*ex post*) to cause adverse effects to the interests of a complaining Member. Serious prejudice is one of these forms of adverse effects, as referred to in Articles 5(c) and 6.3. The present-tense formulation of serious prejudice in Article 6.3 means that the assessment of serious prejudice (and thus the WTO-consistency of a subsidy under Part III) is fundamentally *backward-looking*.²⁹³

6.119. The inclusion of threat of serious prejudice within the scope of serious prejudice, in the context of the effects-based discipline of Part III of the SCM Agreement, enables Members to obtain remedies under Article 7 in respect of serious prejudice that does not presently exist but will exist in the future. A threat of serious prejudice claim is therefore a means to address subsidization that imminently threatens to cause economic harm, without needing to wait until that harm actually manifests. Understood in this context, a threat of serious prejudice is not a form of harm separate from the present form of the particular serious prejudice phenomena in Article 6.3. Rather, it addresses the same harm as the phenomena in Article 6.3, but from a forward-looking perspective because it has not yet occurred but can be expected to do so imminently.²⁹⁴ This temporal difference between threatened and present serious prejudice also means that the argumentation and evidence in support of a claim of threat of serious prejudice will differ from that required to support a present serious prejudice claim.²⁹⁵

6.120. The foregoing considerations lead us to expect that, when a threat of impedance is identified by a WTO adjudicator working with the disciplines of Part III of the SCM Agreement, the adjudicator would be referring to a situation whereby the threatened impedance has not yet manifested itself as impedance in the time-period considered by the adjudicator. In other words, we would expect that a panel makes a finding of threat of impedance when it is not yet able to observe the manifestation of the threatened impedance (i.e. impedance). Indeed, if this were not the case, it would appear to us that the line between findings of threat of serious prejudice and present serious prejudice would become, at minimum, significantly blurred.²⁹⁶

6.121. We further recall that the European Union argues, and we agree, that the compliance panel's findings regarding threat must be examined in their own right and respected in this proceeding. We therefore consider the compliance panel's findings in greater detail.

6.4.5.3.3.2 Findings in the compliance proceedings

6.122. To recall, the European Union argues that the compliance panel temporally situated itself at the time of the 2011 and 2008 lost sales when making its threat of impedance findings. In making this argument, the European Union places particular importance on the phrases "will, to that extent" and "arise in the post-implementation period" appearing in paragraphs 9.437 and 9.438, respectively, of the compliance panel's report. Before examining these paragraphs, we first recall the background against which the compliance panel examined the European Union's claims under

²⁹³ The effects-based discipline in Part III of the SCM Agreement can be contrasted with the prohibited subsidy discipline in Part II, where the WTO-consistency of the subsidy depends on whether it meets the legal criteria in Article 3.1, rather than on a demonstration of its market effects.

²⁹⁴ If the drafters had intended that a threat of serious prejudice would be a distinct form of harm from the Article 6.3 phenomena, it is reasonable to expect that they would have done so by adding a paragraph (e) to Article 6.3 that says: "the effect of the subsidy is a threat of the effects set forth in paragraphs (a) through (d) of this Article". On the contrary, the reference to threat of serious prejudice in a footnote to Article 5(c), the provision that sets forth the obligation not to cause adverse effects through the use of a subsidy, suggests that serious prejudice in Article 5(c) can be established where the market harm specified in Article 6.3 does not yet exist and not only when it has already occurred.

²⁹⁵ See Panel Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, para. 6.214 (stating that "while actual, or present serious prejudice is a distinct phenomenon from threatened serious prejudice, and the evidence required to demonstrate each is necessarily different, we note that as a legal interpretative matter, the term 'serious prejudice to the interests of another Member' as used in the SCM Agreement explicitly includes threat of serious prejudice").

²⁹⁶ The European Union argues that "as a matter of law and fact, it is perfectly possible to have a situation in which the facts and evidence would be capable of supporting findings of two different types of adverse effects in the alternative." (European Union's comments on the United States' response to Arbitrator question No. 66, para. 242) We understand from the context of this argument that the European Union meant that the evidence before the compliance panel supported threat of impedance findings, as well as present impedance findings. We discuss the evidence before the compliance panel further in section 6.4.5.3.3.2 below.

Article 7.8 of the SCM Agreement regarding the existence of present impedance and threat of impedance in the relevant geographic markets in the post-implementation period.

6.123. First, in presenting its serious prejudice case, the European Union had proposed two distinct product markets in which single-aisle LCA competed: (a) an "existing technology" product market (comprising the A320ceo and 737NG); and (b) a "new technology" product market (comprising the A320neo and 737 MAX). The European Union made separate arguments for each alleged *product* market. It supported those arguments with separate order and delivery data for, respectively, existing technology LCA and new technology LCA, across each of the geographic markets at issue. Moreover, in updating the information in support of its serious prejudice claims (submitted in October 2015 as its response to panel question No. 169), the European Union submitted delivery data and projected (future) delivery data, in each case current as of 22 September 2015.²⁹⁷ The compliance panel rejected the European Union's delineation of two product markets, finding that both existing and new technology single-aisle LCA competed in the same product market.²⁹⁸ The compliance panel therefore examined the European Union's claims of displacement, impedance and threats thereof on the basis of aggregated market share data for each geographic market.²⁹⁹

6.124. The European Union's claims and evidence were also structured around a temporal distinction between *present* displacement and impedance, and *threatened* displacement and impedance:

- a. For the US geographic market: The European Union had claimed that the US subsidies caused a *threat of* impedance in the new technology US geographic market, referring to Boeing's *future delivery advantage*, based on present orders.³⁰⁰ The European Union had also claimed that the US subsidies caused *present* impedance *and threat of* impedance in the existing technology US geographic market.³⁰¹
- b. For the UAE geographic market: The European Union had claimed that the US subsidies caused a *threat of* impedance in the new technology UAE geographic market, referring to Boeing's *future delivery advantage*, based on present orders.³⁰² The European Union had also claimed that the US subsidies caused *displacement, impedance and threats thereof*, in the existing technology UAE geographic market.³⁰³

6.125. The compliance panel discussed the phenomena of displacement and impedance, and the evidence "relevant or necessary to support the existence of each phenomenon", based on prior Appellate Body statements.³⁰⁴ In this regard, the compliance panel referred to prior Appellate Body

²⁹⁷ *US – Large Civil Aircraft (Article 21.5 – EU)*, EU Responses to Panel Questions, 8 October 2015 (Exhibit EU-54 (HSBI); EU response to Panel question No. 169 referring to Ascend database, deliveries made, data request as of 22 September 2015 (Exhibit EU-1659 in the compliance proceedings); and Ascend data base, deliveries due, data request as of 22 September 2015 (Exhibit EU-1660 in the compliance proceedings).

²⁹⁸ See Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, paras. 9.39-9.40.

²⁹⁹ See Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, paras. 9.434-9.439 and tables 15, 16, 17, and 18.

³⁰⁰ Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 9.410. See also evidence presented in support in the submission made to the compliance panel in October 2015 in which the European Union updated the evidence on which it relied. (*US – Large Civil Aircraft (Article 21.5 – EU)*, EU Responses to Panel Questions, 8 October 2015 (Exhibit EU-54 (HSBI), European Union's response to Panel question No. 169, paras. 491-492))

³⁰¹ Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 9.412. See also evidence presented in support in the submission made to the compliance panel in October 2015 in which the European Union updated the evidence on which it relied. (*US – Large Civil Aircraft (Article 21.5 – EU)*, EU Responses to Panel Questions, 8 October 2015 (Exhibit EU-54 (HSBI), European Union's response to Panel question No. 169, paras. 509-510))

³⁰² Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 9.410. See also evidence presented in support in the submission made to the compliance panel in October 2015 in which the European Union updated the evidence on which it relied. *US – Large Civil Aircraft (Article 21.5 – EU)*, EU Responses to Panel Questions, 8 October 2015 (Exhibit EU-54 (HSBI), European Union's response to Panel question No. 169, paras. 505-506.).

³⁰³ Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 9.412. See also evidence presented in support in the submission made to the compliance panel in October 2015 in which the European Union updated the evidence on which it relied. (*US – Large Civil Aircraft (Article 21.5 – EU)*, EU Responses to Panel Questions, 8 October 2015 (Exhibit EU-54 (HSBI), European Union's response to Panel question No. 169, paras. 527-528))

³⁰⁴ Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, paras. 9.416-9.421.

statements from the original proceedings in this dispute and in the DS316 dispute that evidence of discernible market share trends was necessary to support findings of displacement and impedance.³⁰⁵ The compliance panel also acknowledged that the Appellate Body in the original proceedings had expressly disagreed with the implication of the original panel's reasoning that the phenomena of displacement and impedance necessarily followed from a finding of lost sales.³⁰⁶

6.126. The compliance panel then recalled its earlier conclusion that there were five LCA sales campaigns involving the 737MAX/737NG and the A320neo/A320ceo between 2007 and 2015 which were price-sensitive, in that Boeing was under particular pressure to reduce its prices in order to secure the sales and there were no non-price factors that explained Boeing's success in obtaining the sales.³⁰⁷ On the basis of that conclusion, the panel found that the Washington State B&O tax rate reduction, *in those sales campaigns*, contributed in a genuine and substantial way to the lowering of Boeing's prices, and that the effects of this subsidy were three significant lost sales of Airbus narrow-body, single-aisle LCA in the post-implementation period. The compliance panel stated that its evaluation of the European Union's claims of "impedance and/or displacement (and/or threats of the foregoing) of imports and/or exports of Airbus single-aisle LCA in the post-implementation period", would necessarily begin from its earlier conclusion and findings that the effect of the Washington State B&O tax rate reduction was three significant lost sales in the post-implementation period, and five significant lost sales between 2007 and 2015.³⁰⁸ The compliance panel concluded that there was no basis for it to examine the European Union's displacement and impedance claims for country markets other than those that involved the five significant lost sales that were the effects of the Washington State B&O tax rate reduction.³⁰⁹

6.127. The compliance panel explained that, for those four geographic markets, there was a causal connection established, *in respect of the five LCA sales campaigns*, between the Washington State B&O tax rate reduction and Boeing's LCA prices. The compliance panel's evaluation of the European Union's claims of displacement and/or impedance (and/or threats thereof) therefore involved a comparison of the market shares of Airbus single-aisle LCA and Boeing single-aisle LCA based on "actual and projected Airbus and Boeing deliveries of single-aisle LCA over the period from 2007 to 2025."³¹⁰ The compliance panel generally accepted the temporal distinction between the present and threatened forms of displacement and impedance and the evidence relevant to the demonstration of each, as indicated in footnote 3368:

As the original panel explained, displacement, impedance, and threat thereof of the complaining party's *imports* or *exports* necessarily involves the existence of goods crossing borders. For the LCA market, in which there is often a significant time-lag between order and delivery, this means any demonstration of market share trends for

³⁰⁵ Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), paras. 9.418-9.420 (referring to Appellate Body Report, *US – Large Civil Aircraft (2nd complaint)*, para. 1086: "We observe that Article 6.4 of the SCM Agreement, which applies to both phenomena referred to in Article 6.3(a) and (b), requires that, as with displacement, a finding of impedance should be supported by evidence of changes in the relative market share in favour of the subsidized product, over a sufficiently representative period, to demonstrate "clear trends" in the development of the market concerned"). The Appellate Body had reversed the original panel's threat of displacement and impedance findings (Appellate Body Report, *US – Large Civil Aircraft (2nd complaint)*, paras. 1089-1090) because the data was insufficient to demonstrate the clear trends in the third-country markets at issue, as required by Article 6.4.

³⁰⁶ Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 9.421. We therefore understand that the compliance panel was aware that a finding of impedance could not be made solely on the basis of the existence of a lost sale, but would additionally require a demonstration of clear trends in market share.

³⁰⁷ Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 9.426.

³⁰⁸ Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 9.427. The compliance panel observed that the European Union had not provided a causal theory in support of its claims of displacement and impedance (and/or threats thereof) other than the theory it had advanced in support of its claims of significant lost sales. (Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), paras. 9.428 and 9.431) The compliance panel rejected the European Union's argument that for "large volume" LCA markets, it could be assumed that the two duopolists would enjoy roughly 50% market share each and that any significant deviation from a 50% market share for several years running, along with other evidence of causation, supported a finding that the deviation is an effect of the subsidy. (Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), paras. 9.429-9.430)

³⁰⁹ Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 9.432 and fn 3366 thereto. These country markets were the United States (Delta Airlines 2011), United Arab Emirates (Fly Dubai 2008 and 2014), Canada (Air Canada 2013,) and Iceland (Icelandair 2013).

³¹⁰ Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 9.432.

the purposes of a displacement, impedance or threat thereof claim should be based on delivery data rather than order data. (See Panel Report, *US – Large Civil Aircraft (2nd complaint)*, paras. 7.1683-7.1686). With respect to the time-period over which we evaluate the existence of market share trends, 2007 to 2025 is the time-period over which the European Union presents its market share data. We note that this period extends both prior to and beyond the reference period of 2013-2015 that we use elsewhere in our findings. We take this longer period in order to ensure, in accordance with the Appellate Body's guidance, that the effects of the subsidy are examined over a period of time that is long enough to discern the existence of clear trends. (Appellate Body Report, *US – Large Civil Aircraft (2nd complaint)*, para. 1081 (citing Appellate Body Report, *EC and certain member States – Large Civil Aircraft*, para. 1166; and *US – Upland Cotton*, para. 478)). This is particularly important for the European Union's threat of displacement and impedance claims, which necessarily require evidence of projected future deliveries.³¹¹

6.128. Given these observations, therefore, we note that the European Union presented its claims of impedance, on the one hand, and threat of impedance, on the other, based on a clear distinction between actual delivery data for the "present" period up to September 2015, and projected delivery data (based on orders) for a "future" period post-September 2015. The compliance panel accepted this temporal distinction between present and threatened displacement and impedance in footnote 3368 in the context of its examination of the relevant market share trends for the period from 2007-2025.

US geographic market

6.129. In examining the European Union's claims of impedance and threat of impedance in the US geographic market, the compliance panel considered aggregated new technology and existing technology market share data showing actual deliveries to September 2015 and projected deliveries from September 2015.³¹² The compliance panel observed that Boeing had enjoyed the majority of the market share for single-aisle LCA deliveries between 2007 and 2016 and that, with minor projected fluctuations in 2017 and 2018, Boeing had been and overall would remain, the dominant duopolist for deliveries of single-aisle LCA in the United States market to 2021, at which time Airbus was projected to overtake it.³¹³ It accordingly considered that, if anything, the trend that seemed to emerge was that "for the next several years until 2021" Airbus' (rather than Boeing's) market share would increase.³¹⁴

6.130. The compliance panel then noted that the only Boeing sale to an LCA customer that was "causally connected" to the Washington State B&O tax rate reduction was the "order of 100 737NG aircraft by Delta Airlines in 2011."³¹⁵ At paragraphs 9.437 and 9.438 of its report, the compliance panel then stated:

Although it seems logical to us that, owing to Airbus losing the 2011 Delta Airlines sales campaign due to the effects of the Washington State B&O tax rate reduction, its imports of single-aisle LCA to the United States market will, to that extent be obstructed, hindered or held back, we are mindful that the phenomenon of impedance is not synonymous with that of lost sales. In any case, there would be little to be gained by the Panel making a finding of impedance of imports in relation solely to lost sales that are already the subject of a finding of significant lost sales.

However, in this instance, because the Delta Airlines order arose in 2011, the Delta Airlines 2011 campaign is not part of the Panel's finding of significant lost sales in the post-implementation period. The threat of impeded imports of A320neos into the United States market that arises from that 2011 Delta Airlines lost sales does, however, arise in the post-implementation period. In these circumstances, we consider it

³¹¹ Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), fn 3368. (italics original; underline added)

³¹² Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), table 15.

³¹³ Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 9.435. In other words, there was no discernible trend that would support findings of displacement or impedance or threats thereof under Article 6.3(a).

³¹⁴ Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 9.435.

³¹⁵ Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 9.436.

appropriate to make a finding in relation to the threat of impedance arising from that lost sale. We therefore find that the effect of the Washington State B&O tax rate reduction is a threat of impedance of imports of Airbus single-aisle LCA into the United States market.³¹⁶

6.131. The use of "will, to that extent" in paragraph 9.437 refers to the logical link between the Delta Airlines lost sale and the displaced or impeded deliveries that will eventuate from that lost sale, notwithstanding that the lost sale was not itself sufficient evidence of displacement or impedance.³¹⁷ We do not consider that, by making this logical observation, the compliance panel necessarily situated itself in 2011 when it made the finding of a threat of impedance.

6.132. Furthermore, we read the reference to "arise in the post-implementation period" in paragraph 9.438 of the report, in the context of paragraph 9.437 and the first sentence of paragraph 9.438, as stating that, although the Delta Airlines lost sale was not a finding of significant lost sale that occurred in the post-implementation period, there "would be impeded imports" from deliveries associated with that lost sale in the post-implementation period and that this made it "appropriate" in the circumstances to make a finding of threat of impedance in relation to that lost sale.³¹⁸

6.133. We therefore see nothing in the compliance panel's findings in paragraphs 9.437 and 9.438 of the compliance panel report to suggest that it situated itself at the time of the 2011 Delta Airlines lost sale when making the threat of impedance finding in the US geographic market. Rather, we understand from paragraphs 9.437 and 9.438 that the compliance panel was justifying that (a) even though the Appellate Body had indicated that impedance could not be presumed from the fact of a lost sale, and even in the absence of the required clear trends in market share, there was a logical connection between the Delta Airlines lost sale and impedance of future Airbus deliveries into the US market, to the extent of deliveries to be made pursuant to that lost sale, and (b) since the Delta Airlines lost sale could not itself be the basis for a finding that the United States had failed to remove the adverse effects of the Washington State B&O tax rate reduction, "in these circumstances" the compliance panel "consider[ed] it appropriate" to make a finding of threat of impedance.³¹⁹

6.134. Moreover, even if the compliance panel's findings in paragraphs 9.437 and 9.438 could be, in isolation, potentially interpreted as meaning that the compliance panel considered the threat of impedance to be all future deliveries stemming from the 2011 Delta lost sale that were scheduled to occur as of the beginning of the reference period (as the European Union argues), the context in which these findings were made, in our minds, forecloses this interpretation.³²⁰ As noted above in paragraph 6.124, the European Union had presented its claims of impedance, on the one hand, and threat of impedance, on the other, based on a clear distinction between actual delivery data for the "present" period up to September 2015, and projected delivery data (based on orders) for a "future" period post-September 2015. Given the compliance panel's earlier acceptance of the temporal distinction between present and threatened displacement and impedance in the European Union's case³²¹, it would have been incongruous if the compliance panel had, without further explanation, made its threat of impedance findings in the US geographic market with respect to anything other than the "projected future deliver[y]" data that the panel had before it (i.e. deliveries projected to occur after the reference period), and which it had stated was "necessary" to support a claim of threat of impedance.³²²

³¹⁶ Italics original; underlining added.

³¹⁷ See para. 6.125 above and fn 305 thereto, above.

³¹⁸ This was despite the Appellate Body's caution that the phenomena of displacement and impedance did not necessarily follow from a finding of significant lost sales in the absence of clear trends in market share.

³¹⁹ Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 9.438.

³²⁰ See paras. 6.94-6.95 above for the European Union's arguments in this regard.

³²¹ See para. 6.127 above, referring to Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), fn 3368, where the panel explains that it would examine the data for the 2007-2025 period as a whole in order to identify the market share trends that are required to support findings of displacement, impedance and threats thereof, and notes specifically that an examination of data beyond the reference period is particularly important for the examination of the claims of threat of displacement and threat of impedance, "which necessarily require evidence of projected future deliveries".

³²² See para. 6.128 above. In this regard, we note that the compliance panel expressly recognized that it was only with respect to adverse effects found to exist in the post-implementation period that the

UAE geographic market

6.135. Table 18 of the compliance panel report sets forth market share data for the single-aisle UAE market over the period 2007-2025, represented by delivery data up to September 2015 and order data (i.e. projected future deliveries) for the period after September 2015. The compliance panel noted that there was no market share trend in favour of Boeing (and adverse to Airbus) until 2017. However, the compliance panel then observed a clear trend, from 2017, in which Boeing's single-aisle deliveries would increase from 2017 to 2022.³²³ The compliance panel specifically linked this change in the market share trend beginning in 2017 to the 737 MAX deliveries that were scheduled to begin in 2017, and which related to the 2014 Fly Dubai campaign:

In 2017, when deliveries of the 737 MAX are due to begin, Boeing will overtake Airbus and retain a market share of between 70 and 100% for the subsequent six years. We also find that Fly Dubai's 2008 and 2014 orders of 50 737NG and 75 737 MAX, respectively, are significant lost sales for Airbus. We conclude, based on the evidence concerning market share trends in the United Arab Emirates market and the evidence of these lost sales, that the effect of the Washington State B&O tax rate reduction is a threat of impedance in the United Arab Emirates market in the post-implementation period.³²⁴

6.136. The compliance panel linked the trend indicating an increase in Boeing's single-aisle deliveries from 2017 to 2022 to the 737 MAX deliveries that were scheduled to begin in 2017. It is, however, clear from the last sentence in the above excerpt from the compliance panel's findings that the compliance panel also referred to the 2008 Fly Dubai campaign as a significant lost sale and based its finding of threat of impedance, in part, on the evidence of this lost sale.

6.137. The European Union points out that, by September 2015, Boeing had made all of its deliveries of the 737NG in connection with the 2008 Fly Dubai lost sale. It considers that, because Boeing had made all of the deliveries under the 2008 Fly Dubai lost sale before the end of the reference period, and because that lost sale was explicitly referred to as a basis for the threat of impedance finding, the compliance panel's temporal viewpoint could not have been the end of reference period, and the Arbitrator must value the 2008 Fly Dubai deliveries that occurred in the reference period as part of the threat of impedance finding.

6.138. It is apparent from the evidence submitted to the Arbitrator in this proceeding that Boeing's last delivery made under the 2008 Fly Dubai campaign was on 14 September 2015; i.e. inside the compliance panel's reference period.³²⁵ Moreover, it is reasonable to infer that, given that the compliance panel had before it evidence of deliveries based on a data request of 22 September 2015 (submitted as Exhibit EU-1659 in the compliance proceeding), the compliance panel also had evidence before it that would have enabled it to determine that the last Boeing delivery under the 2008 Fly Dubai campaign occurred on 14 September 2015. However, it is not possible to determine from the evidence before us in this proceeding whether the compliance panel also had before it evidence of the delivery schedule that Airbus had proposed in its 2008 final offer to Fly Dubai, or

United States could be found to have failed to comply with its obligation under Article 7.8 to take appropriate steps to remove the adverse effects. (Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 9.107) This being so, it is difficult to understand why, without further explanation, the compliance panel would have situated itself significantly before the expiration of the implementation period (i.e. in 2011) to make its finding of threat of impedance. Additionally, the compliance panel used the past tense when describing how the events during the reference period, specifically, orders of LCA that Boeing won at the expense of Airbus, supported its finding of present lost sales. (See Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 9.404) As the United States points out, it would appear inconsistent and illogical for the compliance panel – without explanation – to have phrased findings of significant lost sales during the reference period in the past tense but to have analysed the existence of a threat of impedance from the perspective of some earlier point in time. (United States' comments on the European Union's response to Arbitrator question No. 66, paras. 103-104, and No. 68, para. 142)

³²³ Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 9.443.

³²⁴ Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 9.443. (fns omitted)

³²⁵ See 2 RPQ Ascend Database Update (Exhibit EU-75); and European Union's response to Arbitrator question No. 66 paras. 204, 226, 322, 326, and 330. See also 2008 Fly Dubai Purchase Agreement (Exhibit USA-77 (HSBI), pp. 35-37); and Boeing [[***]] for 2008 Fly Dubai and 2011 Delta Sales Campaigns (Exhibit USA-87 (HSBI)).

whether the Airbus delivery schedule had contemplated deliveries in the post-reference period.³²⁶ It is therefore not possible to identify exactly when the compliance panel believed that Airbus' counterfactual deliveries would have occurred had Airbus won the 2008 Fly Dubai sales campaign.

6.139. In addition, we note that the compliance panel's reference to the 2008 Fly Dubai lost sale in connection with its finding of threat of impedance in the UAE geographic market occurred in a particular context described in an HSBI appendix to the compliance panel report.³²⁷ Based on our review of the HSBI appendix, and given that context, we do not consider that the compliance panel's reference to the 2008 Fly Dubai lost sale in connection with its finding of threat of impedance in the UAE market necessarily shows that the compliance panel must have situated itself at the time of the 2008 Fly Dubai lost sale when making the finding. On the contrary, the compliance panel's efforts to identify a relevant trend in the then-future year 2017 support the conclusion that the panel distinguished the "present" from the "future" according to the evidentiary cut-off of September 2015. In other words, we read the compliance panel's findings as being consistent with its having found the threat of impedance based on projected future delivery data as of September 2015. Accordingly, the compliance panel's threat of impedance findings in the UAE market refer to impedance in the post-reference period and thus consist of post-reference period deliveries.

Summary – findings of the compliance panel

6.140. In light of our analysis of the compliance panel's threat of impedance findings for the US and UAE geographic markets, we conclude that these findings reflect a temporal distinction between deliveries up to September 2015 and projected deliveries post-September 2015. This is so even though the compliance panel based its threat of impedance findings on the impeded deliveries that would result from specific lost sales campaigns in 2011 for the US market and, in part, in 2008 for the UAE market. The compliance panel's threat of impedance findings were made with reference to post-September 2015 deliveries.³²⁸ In particular, this conclusion accords with the way in which the European Union structured its arguments and evidence before the compliance panel, the compliance panel's acceptance of that structure and discussion of such evidence. We therefore do not address the European Union's argument that, in principle, it is possible that the facts and evidence before a panel would be capable of supporting findings of two different types of adverse effects in the alternative. As explained above, we read the compliance panel in this dispute to have based its analysis on a distinction between the evidence that was relevant to the *present* displacement and impedance claims, on the one hand, and the *threat* of displacement and impedance claims, on the other.

6.141. We further find no material indications in the panel's findings that appear inconsistent with the above conclusion. Although we reach our conclusions regarding the compliance panel's findings based on an independent analysis of those findings, we note that our understanding of the compliance panel's findings also accords with the general nature of threat. As described in section 6.4.5.3.3.1 above, the object and purpose of the "threat" concept is to enable the decision maker to identify the likely future occurrence of forms of serious prejudice discussed in Article 6 of the SCM Agreement. Consistent with this object and purpose, the compliance panel identified likely then-future impedance.³²⁹

³²⁶ Although the European Union submitted to the Arbitrator in this proceeding its submissions to the compliance panel in the compliance proceeding, the titles of the relevant exhibits were redacted as HSBI. Other than exhibits specifically discussed in the HSBI appendix to the compliance panel report, it is not possible to determine whether the evidence before the compliance panel included the Airbus final offers for the 2008 Fly Dubai sales campaign.

³²⁷ See *United States — Measures Affecting Trade in Large Civil Aircraft (Second Complaint) – Recourse to Article 21.5 of the DSU by the EU (WT/DS353-Art.21.5)*, Report from the Panel, Appendix 2 (Exhibit EU-65 (HSBI), paras. 160-166, and 266-271). See also Appellate Body Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, paras. 5.516-5.517, where the Appellate Body rejected the United States' appeal of the compliance panel's lost sale finding for the 2014 Fly Dubai sales campaign on the basis that "the outcome of the challenge concerning this sales campaign turns on the same question as that raised in connection with the Fly Dubai 2008 and Delta Airlines 2011 sales campaigns."

³²⁸ The compliance panel did not make *present* displacement or impedance findings, and did not give a specific reason for not doing so.

³²⁹ We are therefore unable to agree with the European Union that our valuation of the threat of impedance findings "deducts" the value of deliveries during the reference period, and thereby invalidates or alters the basis on which the compliance panel found the threat of impedance. (European Union's response to

6.4.5.3.4 Conclusions

6.142. In the light of our discussion of the delivery-centric valuation approach above, we must decline the European Union's request to value deliveries occurring before the end of the reference period as part of the threat of impedance findings.³³⁰

6.143. We note that the European Union has strongly objected to a valuation of the threat of impedance findings made on the basis of any approach according to which the value of threatened deliveries during the reference period would be ignored.³³¹ We have reached our conclusion after objective, serious and exhaustive consideration of the European Union's arguments and the compliance panel's analysis of threat of impedance. We have further noted that the compliance panel's findings accord with the nature of the relevant serious prejudice concepts in the SCM Agreement in the light of instructive decisions of WTO adjudicators and in accordance with customary rules of treaty interpretation. We are mindful that the European Union has insisted that it obtain authorization to impose countermeasures in the form of Annual Suspension in respect of a "threat of impedance" that values all future deliveries from the 2011 Delta Airlines and 2008 Fly Dubai lost sales, whether those deliveries had manifested during or after the reference period.³³² However, as discussed above, we consider that the European Union's proposed valuation methodologies do not value the threat of impedance findings, and would accordingly result in countermeasures that are not commensurate with the degree and nature of the adverse effects determined to exist in the compliance proceedings – an outcome that would be inconsistent with our mandate.³³³

6.144. We therefore underline that we will value the threat of impedance as it was determined to exist by the compliance panel, i.e. with respect to counterfactual deliveries from the 2011 Delta Airlines and 2008 Fly Dubai lost sales that would have occurred in the post-reference period.³³⁴ As discussed above, the finding of threat of impedance directs us to the post-reference period where the expected impedance would occur. We therefore will value that then-expected impedance, updating our understanding of how that then-expected impedance occurred with updated information consistent with our discussion in section 6.4.4 above.

Arbitrator question No. 66, paras. 216-219, 227, and 231) Such an argument is premised on the compliance panel's threat of impedance findings being forward-looking from the time of the respective lost sales.

³³⁰ Owing to this conclusion, we do not need to address further at this point the European Union's proposal that, under its "threat of impedance" approach, the Arbitrator should annualize the threat of deliveries that arose and remained extant in the reference period over the reference period. The Arbitrator's explanation of how it annualizes the values of threat of impedance findings, consistently with the function and propriety of annualization (which we discuss in section 6.4.5.1 above) appears in section 6.4.8.2 below. We further note that, due to our conclusions reached in this section, we would also find that we cannot accept the European Union's methodology described in para. 6.85 above, originally proposed in its methodology paper, because that methodology also relies on valuing deliveries made during the reference period.

³³¹ European Union's response to Arbitrator question No. 67, para. 332 and No. 70, para. 335; combined comments on the United States' responses to question Nos. 66(a) and 69, paras. 216 and 259-261; and comments on the United States' response to Arbitrator question No. 70, para. 330 (regarding the 2011 Delta Airlines deliveries occurring in the reference period). Compare with United States' comments on the European Union's response to Arbitrator question No. 68, para. 131.

³³² The European Union also insists that the level of Annual Suspension also be calculated based on the annualization of the total value of the threat of impedance over the compliance panel's reference period. We address the issue of annualization of the threat of impedance valuations in section 6.4.8.2 below.

³³³ The fact that the Arbitrator's interpretation of the threat of impedance findings from the compliance proceedings does not accord with the European Union's requested interpretation does not, in our view, mean that the Arbitrator thereby disregards or alters those findings, or acts inconsistently with its mandate. Compare with European Union's response to Arbitrator question No. 67, para. 332; response to Arbitrator question No. 70, para. 335; combined comments on the United States' responses to question Nos. 66(a) and 69, paras. 216, 259-261; and comments on the United States' response to Arbitrator question No. 70, para. 330 (regarding the 2011 Delta Airlines deliveries occurring in the reference period).

³³⁴ We therefore disagree with the European Union that a "delivery-centric" approach suggests that the Arbitrator is inappropriately valuing a finding of "actual" impedance, rather than a "threat" of impedance. As discussed at length above, "threat" of serious prejudice is not a different form of economic harm from the present form of the particular serious prejudice phenomena in Article 6.3. Rather, threat refers to the likely future occurrence of the kind of serious prejudice that is threatened. In accordance with that understanding, we value the threatened (i.e. post-reference period) impedance identified by the compliance panel as likely to occur.

6.145. Therefore, in accordance with our mandate under Article 7.10 of the SCM Agreement to ensure that the level of countermeasures is commensurate with the degree and nature of the adverse effects determined to exist, we use the following overall methodologies to value the adverse effects determined to exist in the compliance proceedings:

- a. For the adverse effects in the form of significant lost sales, we adopt an "order-centric" approach in which we value the net delivery-date prices of all of the Airbus LCA that would have been delivered in the counterfactual for each of the three lost sales at the time of the relevant LCA order.
- b. For the adverse effects in the form of threat of impedance, we adopt a "delivery-centric" approach in which we value the net delivery-date prices of all of the Airbus LCA that would have been delivered in the post-reference period in the counterfactual for the 2011 Delta Airlines and 2008 Fly Dubai lost sales.³³⁵

6.146. There remain a number of more technical issues regarding the number of aircraft to be valued as part of the lost sales and threat of impedance, respectively, the time at which the counterfactual deliveries would have occurred, the relevant net delivery-date prices, and whether and how the discounting exercise is performed, which are discussed in sections 6.4.6, 6.4.7 and 6.4.8 below.

6.4.6 Technical issues common to the valuation of both forms of adverse effects

6.147. In this part of the Decision, we address more technical aspects of the European Union's methodology that are common to the valuations of adverse effects in the form of significant lost sales and threat of impedance. These relate to (a) whether, consistent with the causation findings from the compliance proceeding, there should be a probabilistic adjustment to Airbus' lost revenues from each of the five sales campaigns to account for the alleged uncertainty of Airbus winning each campaign in the counterfactual, (b) whether to value options, (c) determining the number of counterfactual Airbus orders and delivery schedules, (d) how to account for the chance of cancellation of counterfactual orders, (e) whether to exclude the value of [***] from delivery prices, and (f) remaining issues concerning delivery prices. We address each in turn.

6.4.6.1 The probability that Airbus would have won each of the five sales campaigns in the counterfactual

6.148. The United States objects to the European Union's methodology for valuing the adverse effects because it is based on the premise that, in the counterfactual, Airbus would have won each of the five single-aisle sales campaigns. According to the United States, this premise was not established in the compliance proceedings and is not accurate. Moreover, the United States argues that by incorporating this assumption into the valuation, the European Union's methodology inflates the proposed countermeasures beyond what would be commensurate with the degree and nature of the adverse effects determined to exist.³³⁶

6.149. The United States refers to the Appellate Body's finding regarding the "genuine and substantial" causation standard under Article 6.3, namely, that the Washington State B&O tax rate reduction needed only to *contribute* to (and not be a "but-for" cause of) Boeing winning a sales campaign in order to be a genuine and substantial cause of the lost sale. According to the United States, this Appellate Body finding shows that the significant lost sales findings were not based on explicit findings that the pricing advantage afforded to Boeing by the Washington State B&O tax rate reduction was greater than the pricing differential between the net prices in the Airbus and Boeing final offers in any of the five sales campaigns.³³⁷ For the United States, the causation analysis in the compliance proceedings therefore left open which LCA manufacturer would have won the relevant sales campaigns absent the subsidy.³³⁸ As a result, the United States argues that there

³³⁵ We address the appropriate annualization periods for the valuations of each of the threat of impedance findings in section 6.4.8.2 below.

³³⁶ United States' written submission, paras. 83-90.

³³⁷ United States' written submission, para. 85.

³³⁸ United States' comments on the European Union's response to Arbitrator question No. 48, para. 28.

is no basis for the valuation of the adverse effects in this proceeding to assume that in the counterfactual, Airbus would have won those campaigns.

6.150. The United States proposes that the Arbitrator's valuation of Airbus' lost revenues arising from each sales campaign should include a probabilistic adjustment to account for the uncertainty of Airbus winning that sales campaign in the counterfactual. Based on its empirical modelling, the United States proposes that the Arbitrator multiply the net present value (NPV) of the lost revenues from each sales campaign by [[***]] to account for the allegedly conservatively calculated probability that, absent the Washington State B&O tax rate reduction, Airbus would not have won the sales campaign.³³⁹

6.151. The European Union disagrees with the United States' proposal on several grounds. First, the European Union argues that any such adjustment would invalidate and alter the findings from the compliance proceedings that the "effect of the subsidy" for purposes of Article 6.3 is significant lost sales.³⁴⁰ The European Union recalls that the Appellate Body has stated that the concept of "lost sales" in Article 6.3(c) refers to sales that suppliers of a complainant "failed to obtain" and that instead were won by suppliers of the respondent.³⁴¹ In finding that the effect of the subsidy was significant lost sales, the compliance panel and Appellate Body therefore found that the relevant sales campaigns were ones that Airbus failed to obtain as an effect of the Washington State B&O tax rate reduction. For the European Union, these findings from the compliance proceedings close the door to the United States re-arguing in this arbitration proceeding that, in the counterfactual, Boeing nevertheless still had a [[***]] chance of winning each of the five sales campaigns. The European Union argues that to conclude otherwise would be to revisit the causation findings of the compliance panel and Appellate Body, which is not part of the Arbitrator's mandate.³⁴²

6.152. Second, the European Union argues that the United States' argument is also contrary to the factual findings underpinning the compliance panel and Appellate Body findings. Specifically, the European Union points to the fact that, in its causation analysis, the compliance panel isolated a particular subset of LCA sales campaigns that were "price-sensitive". These were campaigns in which the outcome turned primarily on the difference in the prices of the Airbus and Boeing aircraft offered. There were no non-price factors that had such an effect on the outcome. The European Union considers that, from this perspective, the compliance panel had eliminated the possibility that Boeing could have prevailed in those sales campaigns in the absence of the Washington State B&O tax rate reduction.³⁴³

6.153. Finally, the European Union objects to the appropriateness of the simulation model submitted by the United States in order to adjust for the probability of Boeing winning the sales campaigns in the absence of the Washington State B&O tax rate reduction, referring to various conceptual and technical failings that, in its view, render the model unreliable.³⁴⁴

6.154. The Arbitrator must determine whether, consistent with the causation analysis in the compliance proceedings, it should include a probabilistic adjustment to the expected value of the lost revenues from each of the sales campaigns to account for the alleged uncertainty of Airbus winning those sales campaigns in the counterfactual.

³³⁹ United States' written submission, paras. 84 and 97. The United States stresses that this probability is not an estimate of the percentage of the "harm" suffered by Airbus due to the Washington State B&O tax rate reduction (i.e. it is not a measure of the Washington State B&O tax rate reduction's contribution to the significant lost sales). Rather, it is an attempt to value adverse effects that reflects "the multiple counterfactual outcomes inherent in the compliance proceeding findings". (United States' response to Arbitrator question No. 13, paras. 58-59 and No. 14, para. 62)

³⁴⁰ European Union's written submission, paras. 40, 42, and 44.

³⁴¹ European Union's written submission, para. 36 (referring to Appellate Body Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 5.331).

³⁴² European Union's opening statement, para. 28; and response to Arbitrator question No. 48, para. 65. The European Union adds that the systemic implications of the United States' argument are that, unless a subsidy is found by the panel and Appellate Body to be the *sole* cause of a serious prejudice phenomenon, an arbitrator under Article 7.10 of the SCM Agreement would implicitly revisit the adopted causation findings by assessing the degree of contribution of a subsidy to a market phenomenon. (European Union's opening statement, para. 30)

³⁴³ European Union's written submission, paras. 44-86; and response to Arbitrator question No. 48, paras. 67-73.

³⁴⁴ European Union's written submission, paras. 87-123.

6.155. The United States argues that the European Union's methodology in this proceeding assumes that, absent the subsidy, Airbus would have won each of the relevant sales campaigns, and thereby reflects a "but-for" causation approach. It suggests that the "but-for" approach is more demanding than the "genuine and substantial" standard accepted in the compliance proceedings. According to the United States, the counterfactual employed in this proceeding to assess the degree and nature of the adverse effects determined to exist must reflect the causation findings in the compliance proceedings. Thus, the United States asserts that the counterfactual cannot be premised on findings that the Washington State B&O tax rate reduction was a "but-for" cause of Airbus losing the sales campaigns, when the actual causation findings establish only that the Washington State B&O tax rate reduction was a "contributing cause".³⁴⁵

6.156. We recall at the outset that, in reaching its finding that the Washington State B&O tax rate reduction was a genuine and substantial cause of significant lost sales in respect of the five single-aisle LCA sales campaigns, the compliance panel first made factual findings that those campaigns were "price-sensitive". This meant that Boeing was under particular pressure to reduce its prices in order to secure the sales, and that there were no non-price factors that explained Boeing's success in obtaining the sales.³⁴⁶ The United States had argued in the compliance proceedings that, in order to sustain a finding of significant lost sales, the per-aircraft magnitude of the Washington State B&O tax rate reduction must be shown to be sufficient to cover the difference in the final net prices of Boeing and Airbus in each of those sales campaigns.³⁴⁷ There was no direct evidence before the compliance panel of the final net prices of Boeing and Airbus in the sales campaigns.³⁴⁸ The compliance panel evaluated the evidence of the approximate differences in net prices between the competing Airbus and Boeing offers where data regarding such approximate differences were available. The compliance panel also compared its estimate of the per-aircraft amount of subsidization represented by the Washington State B&O tax rate reduction to evidence on the record of a NPV difference that "can be determinative of the outcome" of single-aisle sales.³⁴⁹ The compliance panel concluded that the magnitudes of the Washington State B&O tax rate reduction "were capable of enabling at least a portion of Boeing's pricing advantage, *contributing in substantial part* to its winning" the five sales campaigns, and accordingly, that the Washington State B&O tax rate reduction "contributed in a *genuine and substantial* way to *determining the outcome* of those price-sensitive sales campaigns".³⁵⁰

6.157. Earlier in its report, the compliance panel had explained at some length the "genuine and substantial" causation standard that the Appellate Body had previously articulated as the appropriate standard for establishing that the subsidy is the cause of the market phenomena identified in Article 6.3.³⁵¹ In particular, the compliance panel explained that the Appellate Body had stated in the original proceeding that a subsidy need not be the sole cause, or only substantial cause, of such market phenomena in order for it to be found to be a genuine and substantial cause.³⁵² The

³⁴⁵ The United States argues that Article 7.10 of the SCM Agreement requires that the countermeasures "reflect the findings from the compliance proceeding, which include the finding that the subsidy *contributed* to Airbus losing the sale, but was not established to be a but-for cause of Airbus losing the sale". (United States' response to Arbitrator question No. 13, para. 56 (emphasis added)) See also United States' written submission, paras. 85-90.

³⁴⁶ Examples of such non-price factors include Boeing's incumbency and a consequent switching cost advantage, or the suitability of the aircraft for the particular customer's requirements (in terms of range, capacity and delivery availability). (Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), paras. 9.383-9.385)

³⁴⁷ Appellate Body Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 5.503.

³⁴⁸ See Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 9.403 and fn 3322 thereto.

³⁴⁹ Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 9.402.

³⁵⁰ Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), paras. 9.403 and 9.404 and fn 3329 thereto. (emphasis added)

³⁵¹ Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), paras. 9.58-9.61, and fn 2742 (referring to Appellate Body Reports *US – Upland Cotton*, para. 438; *US – Upland Cotton (Article 21.5 – Brazil)*, para. 374; *EC and certain member States – Large Civil Aircraft*, para. 1232; and *US – Large Civil Aircraft (2nd complaint)*, para. 913 (articulating this causation standard under Articles 5(c) and 6.3 of the SCM Agreement)).

³⁵² See Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 9.61 and fn 2747 thereto (referring to Appellate Body Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 914).

compliance panel applied this standard in reaching its conclusion above, regarding the causal connection between the Washington State B&O tax rate reduction and the significant lost sales.

6.158. Before the Appellate Body, the United States argued that the compliance panel could not make significant lost sales findings under Article 6.3 of the SCM Agreement unless it could be shown that, absent the Washington State B&O tax rate reduction, Boeing's prices would have been sufficiently higher such that Airbus would have won the sales campaigns.³⁵³ According to the United States, the proper *application* of the "genuine and substantial" causation standard required that the compliance panel determine that the per-aircraft subsidy amount represented by the Washington State B&O tax rate reduction was sufficient to cover the entirety of the price gap between Airbus' and Boeing's respective final offers for each of the sales campaigns.³⁵⁴

6.159. The Appellate Body equated the United States' argument with a "but-for" test, and observed that it had previously expressed reservations about using a but-for test to determine the existence of a causal link for purposes of Article 6.3 at the "genuine and substantial" standard.³⁵⁵ The Appellate Body explained that this was because a but-for test may be "too undemanding" if the subsidy is "necessary, but not sufficient to bring about" a market phenomenon, and by contrast, may be "too rigorous" if it required that the subsidy be the only cause.³⁵⁶ The Appellate Body then stated:

In light of these considerations, we do not believe that, when a panel chooses to make a comparison between the degree of price reduction made available with the use of the subsidy in a particular sale, on the one hand, and the degree of price difference that could change the outcome of that sale for purposes of assessing causation, on the other hand, the panel is required to establish that the former exceeds the latter in order to conclude that the subsidy contributed in a genuine and substantial way to the subsidized firm winning the sale. For example, in a situation where price is effectively the only consideration for the customer's decision to purchase the product of the subsidized firm instead of the product of the competing firm – as with the particularly price-sensitive campaigns that the Panel identified – it may not be necessary for the subsidy to account for the entire pricing advantage enjoyed by the subsidized firm. Indeed, requiring the subsidy to explain the entirety of the price advantage in such a case may equate to a requirement that the subsidy constitute the *sole* cause of the subsidized firm winning the sale.³⁵⁷

6.160. In addition, the Appellate Body noted that (a) a strict comparison of net prices of the competing aircraft models was not an exclusive indicator of whether the subsidy contributed in a genuine and substantial way to the outcome of particular LCA sales campaigns³⁵⁸, and (b) the compliance panel had also based its lost-sales findings on evidence pertaining to NPV differences and not just on a comparison between the per-aircraft subsidy amounts and the net price differentials in the relevant sales campaigns.³⁵⁹ The Appellate Body ultimately dismissed all of the United States' appeal points regarding the effects of the Washington State B&O tax rate reduction in the single-aisle market.³⁶⁰ Accordingly, the Appellate Body found that the compliance panel did not err in finding that the effect of the subsidy was significant lost sales within the meaning of Article 6.3(c), without

³⁵³ Appellate Body Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 5.503.

³⁵⁴ Appellate Body Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 5.503.

³⁵⁵ Appellate Body Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 5.507.

³⁵⁶ Appellate Body Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 5.507 (referring to Appellate Body Report, *US – Upland Cotton* (Article 21.5 – Brazil), para. 374).

³⁵⁷ Appellate Body Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 5.508. (emphasis original)

³⁵⁸ Appellate Body Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 5.509.

³⁵⁹ Appellate Body Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 5.510. The Appellate Body also dismissed the United States' appeals alleging error under Articles 5(c) and 6.3 of the SCM Agreement regarding the compliance panel's specific lost-sales findings for each of the five sales campaigns, and failure to make an objective assessment under Article 11 of the DSU, in respect of the Fly Dubai 2014, Icelandair 2013, and Air Canada 2013 sales campaigns. (See Appellate Body Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), paras. 5.515, 5.517, 5.520, 5.524, and 5.526)

³⁶⁰ Appellate Body Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), paras. 5.515 and 5.525-5.526. In other words, the United States did not persuade the Appellate Body that, to determine causation at the "genuine and substantial" causation standard, the compliance panel had to be satisfied that the per-aircraft amount of the subsidy was greater than the price differential between the final net prices of Boeing and Airbus in each of the sales campaigns.

necessarily being satisfied that the per-aircraft amount of the subsidy was itself sufficiently large to "cover the margin of victory" between Airbus' and Boeing's final net prices in each sales campaign.³⁶¹

6.161. As explained earlier, our mandate under Article 7.10 of the SCM Agreement is to determine whether the countermeasures proposed by the European Union are "commensurate with the degree and nature of the adverse effects determined to exist".³⁶² The adverse effects in question are significant lost sales, within the meaning of Article 6.3(c) and threatened impeded imports and exports within the meaning of Articles 6.3(a) and (b) (based on underlying lost sales).

6.162. The Appellate Body has previously explained that "lost sales" are sales that suppliers of the complaining Member "failed to obtain" and that *instead were won* by suppliers of the respondent member.³⁶³ The Appellate Body has further explained that an assessment of lost sales normally entails a counterfactual assessment in order to establish that "sales won by the subsidized firm(s) of the respondent Member *would have been made instead* by the competing firm(s) of the complaining Member".³⁶⁴ The findings of significant lost sales in the compliance proceedings in this dispute were based on a counterfactual assessment that the Washington State B&O tax rate reduction contributed in a genuine and substantial way to determining the outcome of the relevant sales campaigns.³⁶⁵

6.163. As previously observed, the United States argues that the causation findings in the compliance proceedings do not provide a basis for the assumption that Airbus would have won the relevant sales campaigns in the counterfactual. This argument, however, appears to be based on the premise that the relevant causation standard, as applied by the compliance panel as part of its counterfactual assessment, should have been consistent with the United States' proposed "but-for" inquiry. The above discussion shows, however, that this premise was rejected by the Appellate Body. Rather, the Appellate Body found that, to make the significant lost sales findings, the compliance panel need only have found that the subsidy in question was a "genuine and substantial" cause of the lost sales. By now arguing that the Arbitrator's valuation should reflect the United States' but-for approach, the United States is effectively seeking to re-litigate an issue that the Appellate Body resolved in the compliance proceedings (i.e. whether the correct application of the "genuine and substantial" causation standard required a demonstration that "but-for" the subsidy, Airbus would have won the sale). We do not consider that we can revisit this issue without thereby reopening and altering the causation findings from the compliance proceedings.

6.164. In sum, and as explained above, the counterfactual assessment reflected in the adopted findings from the compliance proceedings is that, absent the Washington State B&O tax rate reduction, Airbus would have won the five sales campaigns in question. Once there is a legal finding that a subsidy causes significant lost sales within the meaning of Article 6.3(c), it follows that the sales in question are sales that would have been won by the complaining Member, absent the subsidy.³⁶⁶ The Appellate Body upheld the compliance panel's causation findings, *at the genuine and substantial causation standard*. The European Union's methodology in this proceeding is consistent with the counterfactual assessment from the compliance proceedings, and with the findings of significant lost sales.

6.165. We therefore reject the United States' proposal to include in our valuation of the adverse effects a probabilistic adjustment to the expected value of each of the sales campaigns to account for the alleged uncertainty of Airbus winning that sales campaign in the counterfactual. Doing so, as explained above, would be inconsistent with the degree and nature of the adverse effects determined to exist.

³⁶¹ Appellate Body Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 5.503.

³⁶² See section 3 above.

³⁶³ Appellate Body Reports, *EC and certain member States – Large Civil Aircraft*, para. 1220; and *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 5.331.

³⁶⁴ Appellate Body Reports, *EC and certain member States – Large Civil Aircraft*, para. 1216; and *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 5.331. (emphasis added)

³⁶⁵ Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 9.404; and Appellate Body Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 5.526.

³⁶⁶ In this regard, the United States appears to conflate the standard according to which the adverse effects findings were made, with the findings themselves. The Arbitrator's role is simply to value the findings that were made, not to re-engage on the issue of the standard at which they were made, which is an issue that was raised and addressed on appeal.

6.4.6.2 Valuation of options

6.166. The European Union argues that, in determining a maximum level of Annual Suspension, the Arbitrator should include the value of certain LCA options contained in (a) the Airbus final offers or (b) Boeing purchase agreements in connection with the five lost sales campaigns that underlie the compliance panel's findings of threat of impedance and lost sales. More concretely, according to the European Union, if the Arbitrator relies on Airbus' final offers submitted in the relevant sales campaigns to determine the number of aircraft Airbus would have sold in the counterfactual, then the Arbitrator should also value the options contained in those final offers as if they represented additional counterfactual firm orders. The European Union argues that this is so because: (a) it is necessary to do so "in light of the airline's express need for the specific number of Boeing aircraft actually ordered"³⁶⁷; and (b) options are an integral part of LCA purchasing agreements and reflect what Airbus believed to be the customer's requirements, preferences, and views, and Airbus' own constraints. Alternatively, according to the European Union, if the Arbitrator relies on the Boeing purchase agreements in the relevant sales campaigns to determine the number of aircraft Airbus would have sold in the counterfactual, then the Arbitrator should value 30 options that were exercised as a result of the 2011 Delta Airlines sale.³⁶⁸

6.167. The United States argues that the European Union's request to value options should be rejected mainly because it is contrary to the findings of the compliance panel. The United States asserts that the compliance panel distinguished firm orders from options when it rejected the European Union's claim that the existence of options negotiated in connection with certain Boeing purchase agreements should give rise to a finding of threat of significant lost sales. The United States also argues that, with respect to the 2011 Delta Airlines campaign, as a factual matter, none of the options associated with the 2011 Delta Airlines sale were ever exercised. The United States submits that the European Union's assertion that 30 options formed part of the Delta Airlines 2011 order is factually incorrect because it is based on an erroneous understanding of the contractual documents between Delta Airlines and Boeing.³⁶⁹

6.168. In response to the European Union's assertion that the relevant airlines' need for the specific number of Boeing aircraft ordered supports the inclusion of options in the Arbitrator's valuation of the lost sales in question, the United States argues that an airline order for a specific number of Boeing aircraft does not mean that Airbus would have sold the airline the same number of Airbus aircraft. The United States therefore concludes that there is no reason to add proposed options to the number of firm orders which Airbus offered to make up for any difference between the number of Boeing LCA actually ordered and Airbus LCA offered in any sales campaign. The United States also asserts that although many things are an "integral" part of LCA purchasing agreements, the compliance panel recognized that not all such things are the same and that a firm order and an option are different.³⁷⁰

6.169. Responding to the United States' arguments, the European Union argues that valuing at least the Delta Airlines options is consistent with the compliance panel's findings. This is so, according to the European Union, because the compliance panel found that the 2011 Delta Airlines sales campaign was a "lost sale" and thus the Arbitrator must value all of the deliveries that result from it. Further, the European Union argues that the compliance panel's relevant findings to which the United States refers do not discuss options in connection with the 2011 Delta Airlines lost sale, but the European Union's claim of "threat of significant lost sales" based on the existence of options in connection with the 2013 Icelandair, 2013 Air Canada, and 2014 Fly Dubai lost sales. In any case, the European Union is of the view that the compliance panel's findings to which the United States refers are inapposite because the compliance panel stated that it did "not possess sufficient information about the nature of these options and purchase rights, including the conditions under which they may be exercised, to justify treating them as firm orders that are waiting to materialize"³⁷¹, but this Arbitrator has enough information showing that all 30 options in connection with the Delta Airlines 2011 lost sale have been exercised. The European Union further rejects the United States' position that the European Union's assertion that 30 options formed part of the Delta

³⁶⁷ European Union's written submission, para. 231.

³⁶⁸ European Union's written submission, paras. 231-232 and 251-277; and response to Arbitrator question No. 10.

³⁶⁹ United States' written submission, paras. 157-158; and response to Arbitrator question No. 15; No. 32; No. 50, paras. 41-42; and No. 72.

³⁷⁰ United States' response to Arbitrator question No. 15.

³⁷¹ Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), fn 3330.

Airlines 2011 order is factually incorrect because it is based on an erroneous understanding of the contractual documents between Delta Airlines and Boeing, arguing that the European Union's understanding of the relevant documentation is sound.³⁷²

6.170. The European Union develops two additional arguments that it considers weigh in favour of valuing the relevant options: (a) just as the DS316 arbitrator took into account cancellations that occurred after the time of order, this Arbitrator must, using the same logic, value options that were exercised subsequently to the Delta Airlines order in 2011; and (b) unlike the compliance panel, whose task was to determine the *existence* of adverse effects, this Arbitrator must *quantify* those adverse effects by taking into consideration the most recent evidence available, including information on the exercise of options.³⁷³

6.171. The Arbitrator finds it helpful to first frame the relevant issue. The European Union argues that the Arbitrator may value options³⁷⁴ in connection with sales campaigns underlying the compliance panel's findings concerning both significant lost sales and threat of impedance. It will be recalled that the compliance panel's findings concerning threat of impedance were expressly predicated on findings that certain sales campaigns involved significant lost sales to Airbus.³⁷⁵ In short, all the relevant findings of the compliance panel are based on findings of significant lost sales. We also note that the European Union argues that the Arbitrator may, depending on whether it bases the number of additional counterfactual Airbus orders on the Airbus final offers or the Boeing purchase agreements, value options in and of themselves (i.e. as contractual clauses effectively representing sales of LCA³⁷⁶) or options as actually exercised (i.e. the Delta options). Thus, the question that we must resolve in this context is whether options in either the Boeing purchase agreements or Airbus final offers, whether exercised or not, can be considered as part of the relevant "lost sales" identified by the compliance panel.

6.172. We answer this question in the negative. In doing so, we first note that we see no basis on which to value contractual options clauses as part of the relevant "lost sales", as the European Union suggests we may do. We accept that, in losing the sales campaigns in question, Airbus may have lost sales of contractual options clauses to airline customers. Options are sold in many commercial contexts and themselves have value.³⁷⁷ In relevant part, however, this dispute concerns the subsidization of Boeing LCA and, in turn, lost sales of Airbus LCA. What we are concerned with, therefore, is valuing lost sales of *Airbus LCA*, not contractual options clauses. The parties, panels, and Appellate Body have consistently, throughout this dispute (and the *EC and certain member States – Large Civil Aircraft* dispute), identified lost sales of LCA with reference to LCA orders arising out of sales campaigns.³⁷⁸

6.173. The question thus becomes whether the compliance panel considered the "lost sales" of Airbus LCA to be: (a) orders that would have been placed with Airbus instead of with Boeing in the

³⁷² European Union's written submission, paras. 253-272; response to Arbitrator question No. 56, para. 135; oral response to Arbitrator question No. 71 at the meeting of the Arbitrator; and comments on the United States' response to Arbitrator question No. 50, paras. 96-99; and No. 72.

³⁷³ European Union's written submission, paras. 273-275.

³⁷⁴ Going forward, we will refer to "options" as including both "options" and "purchase rights". The European Union has explained that the only difference between the two is that purchase agreements assign delivery schedules in connection with the former but not in connection with the latter. (European Union's response to Arbitrator question No. 10, para. 59)

³⁷⁵ Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), paras. 9.428, 9.438, and 9.478-9.482.

³⁷⁶ We note that the number of options in the Airbus final offers is HSBI.

³⁷⁷ European Union's response to Arbitrator question No. 52, para. 88 (explaining that "under Airbus PAs, [[***]] to an airline" because they [[***]]); and United States' comments on the European Union's response to Arbitrator question No. 56, para. 68 (noting that options [[***]]).

³⁷⁸ We also note that "the word 'sale' is defined as 'the action or an act of giving or agreeing to give something to a person in exchange for money'". (Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft* (Article 22.6 – EU), para. 6.98 (quoting *Shorter Oxford English Dictionary*, 6th edn, A. Stevenson (ed.) (Oxford University Press, 2007), Vol. 2, p. 2652)) Viewing an option to purchase an LCA at a specific price to be exercised in the future, particularly when in the sole discretion of the purchaser, as being an "agree{ment} to give {an LCA} to a{n LCA customer} in exchange for money" appears problematic. Indeed, it is possible that the option may never be exercised or that the customer's decision to purchase additional aircraft, which it could do through the exercise of an option, may generate a competition in which the competing LCA manufacturer secures those orders instead. (Declaration of [[***]] (Feb. 28, 2020) (Exhibit USA-51(BCI)), para. 6)

counterfactual in connection with the five relevant five sales campaigns at the conclusion of such sales campaigns (practically speaking, in Airbus' counterfactual purchase agreements); or (b) any order that would have been placed with Airbus in the counterfactual instead of with Boeing at any time had Airbus won the sales campaigns in question (at least insofar as such orders would have arisen from the exercise of options that Airbus would have secured in connection with those sales campaigns).³⁷⁹ The European Union's position in this context depends on the latter interpretation.

6.174. We recall that, in its lost sales analyses, the compliance panel generally focused on the extent to which the Washington State B&O tax rate reduction helped Boeing prevail in the five relevant sales campaigns.³⁸⁰ At first glance, that mode of analysis might suggest that the compliance panel's lost-sales findings are broad enough to encompass any order (including an order arising from subsequent exercises of options) that Airbus would have won instead of Boeing in the counterfactual had Airbus won the sales campaigns. This is so essentially because the total value of winning a sales campaign could be interpreted as meaning the value of any and all orders that Airbus would have secured had it won the campaign, no matter how or when in the future such orders would have arisen.³⁸¹ Upon closer examination of the compliance panel's findings, however, it is sufficiently clear to us that the compliance panel confined its lost-sales findings to the orders that Airbus would have secured at the time the relevant sales campaigns were lost.

6.175. We recall footnote 3330 of the compliance panel report:

The European Union further argues that U.S. subsidies benefiting the 737 MAX and 737NG cause a *present threat of significant lost sales*, within the meaning of Article 6.3(c) and footnote 13 of the SCM Agreement. ... In support of this argument, the European Union relies on evidence of the existence of *options and purchase rights* negotiated in connection with the relevant orders The European Union makes this threat of significant lost sales argument in relation to the following sales campaigns that we find to evidence significant lost sales: Icelandair 2013 ... , Air Canada 2013 ... , and Fly Dubai 2014³⁸² (emphasis added)

6.176. The compliance panel continued:

³⁷⁹ The only relevant counterfactual orders that the European Union specifically argues Airbus would have secured as a result of options exercised (i.e. beyond what Airbus would have secured in its five additional counterfactual purchase agreements) are the 30 options that the European Union argues were exercised that arose out of the 2011 Delta Airlines sales campaign. (See section 6.4.6.3 below, finding that Airbus would have secured more firm orders in the [***] sales campaigns than Airbus proposed in its final offers because such additional orders would have been firm orders placed at the time the sales campaigns were lost, rather than due to the exercise of options). We note that these orders were placed with Boeing after the reference period used in the compliance proceedings ended, and, accordingly, the compliance panel report never mentions these orders. (European Union's comments on United States' response to Arbitrator question No. 72)

³⁸⁰ See e.g. Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 9.385 (indicating that the Washington State B&O tax rate reduction subsidy "affected Boeing's pricing behaviour with respect to the 737 MAX and 737NG in five price-sensitive sales campaigns between 2007 and 2015"); para. 9.400 (discussing the "potential for a comparatively small price reduction to determine the outcome of a sales campaign"); para. 9.404 ("We are therefore satisfied that the Washington State B&O tax rate reduction, through the effects on Boeing's pricing, contributed in a genuine and substantial way to determining the outcome of price-sensitive sales campaigns involving the 737 MAX and 737NG and the A320neo and A320ceo in the Fly Dubai 2014, Air Canada 2013 and Icelandair 2013 campaigns"); para. 9.407 ("We find that the Washington State B&O tax rate reduction is a genuine and substantial cause of serious prejudice in the form of significant lost sales of A320neo and A320ceo families of LCA in the post-implementation period, in respect of the sales campaigns Fly Dubai 2014, Air Canada 2013, and Icelandair 2013"); para. 9.479 ("The Panel finds that the Washington State B&O tax rate reduction is a genuine and substantial cause of serious prejudice in the form of significant lost sales of A320neo and A320ceo families of LCA in the post-implementation period, in respect of the sales campaigns for Fly Dubai in 2014, Air Canada in 2013, and Icelandair in 2013"); para. 11.8(c) (containing similar statements); and fn 3329 ("We also consider that the Washington State B&O tax rate reduction was a genuine and substantial cause of lost sales of the A320ceo in the Fly Dubai 2008 and Delta Airlines 2011 sales campaigns").

³⁸¹ We note that, under this interpretation, the value of the sales campaigns might also include follow-on orders that the winning aircraft manufacturer secured as a result of, for example, incumbency advantages resulting from the sales campaign. We discern nothing in the compliance panel report indicating that such an interpretation was intended, however.

³⁸² Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, fn 3330.

We do not consider that the mere fact that an LCA customer was additionally granted options or purchase rights is sufficient to demonstrate that *lost sales in relation to these options and purchase rights are clearly foreseen and imminent, and thus give rise to a threat of significant lost sales*. The Panel does not possess sufficient information about the nature of these options and purchase rights including the conditions under which they may be exercised, *to justify treating them as firm orders that are waiting to materialize*. Indeed, there is evidence before us to suggest that not all options will be exercised. ... We are therefore not persuaded that the European Union has demonstrated that *further significant lost sales* are likely and "imminent".³⁸³ (emphasis added)

6.177. Two key points emerge from the above passage: (a) that the compliance panel considered firm orders, but not contractual options clauses, to be LCA "sales"; and (b) that firm orders resulting from the exercise of options, if and when they may arise after the reference period, are outside the scope of "lost sales" that the compliance panel identified. This is so because the compliance panel implicitly accepted that the presence of options could form the basis of a finding of a *threat* of "further" lost sales, but only if it was sufficiently clear that the options would be *exercised* and thus result *in firm orders*. In other words, and logically speaking, the compliance panel necessarily treated "lost sales" in connection with options (i.e. future firm orders) as distinct from the "lost sales" that it identified in connection with the relevant lost sales campaigns. Indeed, if the compliance panel had considered options and/or firm orders resulting from their potential exercise as part and parcel of the "lost sales" that the compliance panel identified, footnote 3330 would become nonsensical — there would have been no logical basis upon which to analyse options as potential "further significant lost sales" at all. That is, unless one could characterize options as comprising *both* lost sales in and of themselves at the time of their exercise *and* as forming part of previous lost sales at a previous time. That characterization, however, appears illogical and unsupported by the findings of the compliance panel.

6.178. We recognize that footnote 3330 addresses options concluded by Boeing in connection with the Icelandair 2013, Air Canada 2013, and Fly Dubai 2014 sales campaigns. It does not mention, in particular, the 2011 Delta Airlines sales campaign or any options that Boeing may have secured in that sales campaign. The European Union, however, has pointed to, and we discern, nothing in the compliance panel's report that suggests that the compliance panel would have treated such options differently and found that such options were within the scope of its lost-sales findings. Indeed, with respect to the Delta Airlines options the exercise of which the European Union wishes us to value, we note that the compliance panel stressed that the 2011 Delta Airlines "lost sale" occurred *before* the post-implementation period — a statement we find difficult to reconcile with the notion that we should value the exercise of options purportedly forming part of this "lost sale" that occurred *in* the post-implementation period. We also note that the compliance panel did not even mention such options when summarizing the "main details" of this sales campaign.³⁸⁴

6.179. Certain key aspects of the compliance panel's analysis regarding significant lost sales in the reference period are also consistent with the understanding that the compliance panel confined its lost-sales findings to the orders that Airbus would have secured at the time the relevant sales campaigns were lost. The compliance panel identified lost sales in the reference period by identifying price-sensitive LCA sales campaigns that Boeing had won, and then assessing the extent to which the Washington State B&O tax rate reduction enabled Boeing to prevail in those campaigns by allowing Boeing to lower its LCA prices. As noted in section 6.4.6.1 above, as part of that analysis the compliance panel calculated a "per-aircraft rate of subsidization" for the aircraft that Boeing sold in the Fly Dubai 2014, Air Canada 2013 and Icelandair 2013 campaigns.³⁸⁵ The compliance panel calculated this rate by dividing the average yearly amount of subsidies granted under the Washington State B&O tax rate reduction by "an average of 54.3 single-aisle aircraft *orders* per year for 2013-2015 (calculated from the total of 11 737NGs and 152 737 MAX *ordered from the Fly Dubai 2014, Air Canada 2013 and Icelandair 2013 campaigns*, divided by three)".³⁸⁶ These numbers referenced by the compliance panel are *firm orders*. The compliance panel was silent as to options in this context, which indicates that the compliance panel was focused on the Washington State B&O

³⁸³ Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), fn 3330.

³⁸⁴ Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), table 12 and paras. 9.436, 9.438, and 9.481.

³⁸⁵ Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 9.402.

³⁸⁶ Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), fn 3321. (emphasis added)

rate reduction's ability to enable Boeing to lower prices for and win (and Airbus to lose) firm orders, specifically. This is significant because the compliance panel was well aware that Boeing had concluded options in connection with both the 2014 Fly Dubai and 2013 Air Canada sales campaigns.³⁸⁷

6.180. Additionally, the compliance panel's reasoning as to why the 2014 Fly Dubai, 2013 Air Canada, and 2013 Icelandair lost sales were "significant" within the meaning of Article 6.3(c) is consistent with the understanding that the compliance panel confined its lost-sales findings to the orders that Airbus would have secured at the time the relevant sales campaigns were lost. The compliance panel found that those three lost sales were "significant" due to the "size of the orders that Boeing had won" and the fact that the sales campaigns were "strategically important to Boeing and Airbus".³⁸⁸ When discussing the former consideration, the compliance panel noted that "{t}he Fly Dubai, Air Canada and Icelandair sales campaigns involve *orders* for approximately 152 737 MAX and 11 737NG aircraft".³⁸⁹ These "orders" are the numbers of *firm orders*. The compliance panel did not mention options in this context, which indicates that the "significance" of the lost sales lay in the significance of orders secured at the conclusion of the sales campaign alone.³⁹⁰ This is significant because, as already noted above, the compliance panel was well aware that Boeing had concluded options in connection with both the 2014 Fly Dubai and 2013 Air Canada sales campaigns.

6.181. With respect to the compliance panel's analysis regarding threat of impedance (which, as explained, was predicated on findings of certain significant lost sales), the compliance panel found "that Fly Dubai's 2008 and 2014 orders of 50 737NG and 75 737 MAX, respectively, are significant lost sales for Airbus".³⁹¹ It will be recalled that as a result of the 2014 Fly Dubai sales campaign Boeing secured not only 75 firm orders for 737 MAX LCA but also 25 purchase rights for 737 MAX LCA, of which the compliance panel was well aware.³⁹² Again, therefore, in this context the compliance panel was focused solely on the firm orders on the record before the compliance panel when making findings of lost sales, not on options or firm orders that may have resulted from the firm orders on the record in the then-future.

6.182. Finally, we underline that we discern no point in the compliance panel's report where the compliance panel indicated in any meaningful way that it considered the eventual exercise of options to be part and parcel of the "lost sales" that it had otherwise identified.³⁹³ As discussed above, we only find statements indicating the contrary.

6.183. For the foregoing reasons, the Arbitrator finds that relevant options clauses, whether exercised or not, are outside the scope of the compliance panel's relevant lost-sales findings. Valuing them would therefore be inconsistent with the degree and nature of the adverse effects determined

³⁸⁷ Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, table 12; 2013 Air Canada Purchase Agreement (Exhibit USA-81 (HSBI)), pp. 144-148 (containing options pricing information); Air Canada final offer, **[[HSBI]]** (Exhibit EU-3 (HSBI)), pp. 2, 8, 37 and schedules 3-5 (containing options pricing information); 2014 Fly Dubai Purchase Agreement (Exhibit USA-85 (HSBI)), pp. 154 and 155 (containing options pricing information); and Fly Dubai 2014 final offer, **[[HSBI]]** (Exhibit EU-6 (HSBI)), pp. 15 and 28 (containing options pricing information)).

³⁸⁸ Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, paras. 9.405-9.406.

³⁸⁹ Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 9.406. (emphasis added)

³⁹⁰ The compliance panel also found that the 2011 Delta Airlines and 2008 Fly Dubai sales were "significant", but did not elaborate on this topic. (Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, fn 3335)

³⁹¹ Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 9.443. In 2014 Fly Dubai also ordered 11 737NGs as part of this sales campaign. (Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, table 12 and fn 3321)

³⁹² Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, table 12.

³⁹³ We also note that the Appellate Body has explained that, under certain circumstances, "options or purchase rights ... may be indicative of an ongoing phenomenon of lost sales" which temporally extends beyond the initial relevant "transactions", although whether this "ongoing phenomenon" exists requires fact-specific inquiries. (Appellate Body Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, para. 5.333) Neither the compliance panel nor the Appellate Body engaged in any fact-specific inquiries regarding whether, let alone establishing that, the relevant "lost sales" identified by the compliance panel would be "ongoing" through the period in which options were exercised or up until any time beyond the point at which the sales campaigns were lost at all. Further, we are mindful that any finding on our part indicating that such an "ongoing phenomenon of lost sales" (e.g. up until the time of any options exercises) existed with respect to the lost sales in question could be taken as substantively pertaining to the United States' temporal compliance obligations with respect to such lost sales.

to exist. We accordingly decline to consider options, whether exercised or not, in the Arbitrator's determination of a maximum level of Annual Suspension.

6.4.6.3 The number of firm orders in the counterfactual and the timing of the deliveries

6.184. The European Union argues that, in the counterfactual, it should be assumed that the airlines in the five relevant sales campaigns would have placed the same number of firm orders for Airbus LCA as the airlines actually placed with Boeing, not the number of firm orders proposed in the Airbus final offers in those campaigns. In the European Union's view, this approach is consistent with how the DS316 arbitrator valued lost sales and with the adopted findings in the compliance proceedings in this dispute. The European Union also asserts that the "best proxy for counterfactual negotiation results, in terms of aircraft delivery numbers, is reflected not in Airbus' final offers, but in the demonstrated demand by each airline, as manifested in the actual results of Boeing's negotiation with each airline".³⁹⁴ According to the European Union, this is so because although Airbus' final offers reflect feedback from the airlines, they represent just a "snapshot of the actual bilateral negotiations between Airbus and each airline at a particular point in time"³⁹⁵, negotiations that would have continued and eventually concluded had it not been for relevant subsidies.

6.185. In cases where the Airbus final offer contained fewer proposed firm orders than what Boeing obtained (i.e. in the [[***]] sales campaigns), the European Union explains that Airbus had the commercial incentive to secure additional orders and had the production capacity to deliver them, demonstrated by the presence of options in the relevant final offers. Also, the European Union argues that the Boeing and Airbus models at issue with respect to any particular sales campaign are substitutable, and thus that it is reasonable to think that customers would have ordered the same number of LCA from Airbus in the counterfactual as they did from Boeing. This is especially so, according to the European Union, because in the [[***]] relevant campaigns "the [[***]] airlines could only have satisfied their proven demand for seating capacity by ordering the same number of Airbus LCA as actually ordered from Boeing".³⁹⁶ According to the European Union, these [[***]] airlines could have done so by either placing additional firm orders in the purchase agreement or exercising options contained in the purchase agreements. The European Union further asserts that the manner in which Boeing negotiated with [[***]] supports the European Union's position in this context. The European Union also argues that the United States' suggestion that the relevant customers would have decreased the number of firm orders proposed in the relevant Airbus final offers is contrary to commercial realities in the LCA industry and unsupported by material evidence.³⁹⁷

6.186. Regarding counterfactual delivery schedules, the European Union argues that Airbus would have delivered its LCA in accordance with the delivery schedules to which Boeing and the airline agreed in the relevant purchase agreements. According to the European Union, it is reasonable to conclude that relevant demand-side pressures would have led Airbus to agree to the same delivery schedules as those contained in those purchase agreements. The European Union further asserts that this approach is consistent with the approach used in the DS316 arbitration, in which the arbitrator assumed that the counterfactual delivery schedule would be the delivery schedule that Airbus (i.e. the actual winner of the relevant campaigns) actually secured in the relevant sales campaigns. In the European Union's view, even-handedness compels the Arbitrator to use that same approach here.³⁹⁸

³⁹⁴ European Union's response to Arbitrator question No. 51, para. 83. (emphasis omitted; internal quotation marks omitted; fn omitted)

³⁹⁵ European Union's response to Arbitrator question No. 51, para. 82. (emphasis omitted)

³⁹⁶ European Union's response to Arbitrator question No. 54, para. 99. (BCI brackets added; emphasis omitted)

³⁹⁷ European Union's written submission, paras. 221-229; response to Arbitrator question No. 8, para. 46; No. 9; No. 10; and Nos. 51-56; and comments on the United States' responses to Arbitrator question Nos. 50 and 54-56.

³⁹⁸ European Union's written submission, paras. 221-222; and response to Arbitrator question No. 9. The European Union recalls that the DS316 arbitrator found it less problematic to use as Boeing's counterfactual delivery schedules the delivery schedules to which Airbus agreed with the airline customers as they "reflect the actual pressures from the demand side because they have been accepted by the customers involved in the lost sales at issue". (European Union's written submission, para. 226 (citing Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.263))

6.187. The United States argues that, in the counterfactual, it should be assumed that the airlines in the five relevant sales campaigns would have placed the number of firm orders for Airbus LCA that Airbus proposed in its final offers to the airlines, and that Airbus would have delivered those aircraft according to the delivery schedule in each such final offer. The United States argues that this is consistent with the findings in the compliance proceedings because the compliance panel never specified the number of firm orders that Airbus would have secured in the counterfactual. The United States also argues that the approach taken in the DS316 arbitration with respect to counterfactual order numbers and delivery schedules need not be followed here because the relevant findings and evidence in this arbitration are different from those in the DS316 arbitration. Further, the United States asserts that the Airbus final offers represented the result of a negotiating process in which Airbus understood the customer's needs in relation to Airbus' supply-side constraints. Moreover, in the United States' view, airlines rarely increase the number of firm orders between the receipt of final offer and signing a subsequent purchase agreement, in particular because airlines will more commonly solicit offers for larger numbers of aircraft than they actually need in the hopes of securing volume discounts. The United States also asserts that the presence of options in Airbus final offers does not establish that Airbus had sufficient production capacity to fill more firm orders than were proposed in the final offers because LCA manufacturers, as part of their so-called "skyline management" practices, [[***]]. Additionally, according to the United States, customers have incentives to secure options rather than firm orders from Airbus because the former [[***]] for airlines than firm orders.

6.188. The United States also asserts that Airbus and Boeing single-aisle LCA are differentiated products (including with respect to seating capacities) and therefore customers may want different numbers of Boeing versus Airbus single-aisle LCA. In addition, the United States asserts that delivery availability may differ as between Airbus and Boeing LCA, which may cause an airline to desire different numbers of Airbus or Boeing LCA at a given point in time. Finally, with respect to the [[***]] sales campaign, the United States explains that the customer's order size with Boeing reflected Boeing-specific considerations. The United States thus argues that any finding that Airbus would have secured the same number of firm orders in the relevant sales campaigns as Boeing actually secured would be based on speculation.³⁹⁹

6.189. The Arbitrator notes that the parties disagree regarding two related subjects in this context, i.e. the number of counterfactual orders that Airbus would have received as a result of the five relevant sales campaigns and the delivery schedules that would have governed the deliveries of such orders. We address each in turn below.

a. Counterfactual order numbers

6.190. In this section, we address the issue of the number of firm orders that Airbus would have received in the five relevant sales campaigns in the counterfactual.

6.191. At the outset, we recall the European Union's argument that the findings in the compliance proceedings establish that, in the counterfactual, the airlines in the five relevant sales campaigns would have ordered the same number of Airbus LCA as they did from Boeing in reality. This is so because, according to the European Union, the compliance panel specified that the number of firm orders that Boeing received as a result of the five relevant sales campaigns and of which the compliance panel was aware were themselves the "lost sales".⁴⁰⁰ We observe that certain of the compliance panel's findings regarding relevant sales campaigns do suggest this⁴⁰¹ while findings with respect to other sales campaigns are more ambiguous.⁴⁰² We consider, however, that even if the

³⁹⁹ United States' written submission, section VIII and paras. 135-142; responses to Arbitrator question Nos. 8-10, 50, and 54-56; and comments on the European Union's responses to Arbitrator question Nos. 51-54, and 56.

⁴⁰⁰ See e.g. European Union's response to Arbitrator question No. 54, para. 96 and accompanying bullet points (stating, *inter alia*, that "the findings by the compliance adjudicators are that Airbus suffered lost sales of 16 LCA in the Icelandair campaign, and 86 LCA in the Fly Dubai 2014 campaign" (emphasis omitted)).

⁴⁰¹ See e.g. Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 9.443 (stating that "that Fly Dubai's 2008 and 2014 orders of 50 737NG and 75 737 MAX, respectively, are significant lost sales for Airbus" (emphasis added)).

⁴⁰² Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 9.404 ("Accordingly, we consider that the effects of the Washington State B&O tax rate reduction were lost sales of the A320neo and A320ceo in the Fly Dubai, Air Canada, and Icelandair sales campaigns in the 2013-2015 period."). (Ibid., fn omitted)

compliance panel did not specify the number of "lost sales" with respect to any particular sales campaign, other adopted findings in this dispute and evidence on the record of this arbitration proceeding establish that it is reasonable to assume that, in the counterfactual, Airbus would have secured the same number of firm orders in its purchase agreements in all five relevant sales campaigns as Boeing secured in its actual purchase agreements.

6.192. In examining such findings and evidence, we first note that the European Union and United States direct their arguments in this context at the [[***]] sales campaigns because in each such campaign Airbus proposed fewer firm orders in its final offer than Boeing secured in its purchase agreements with each of these airlines. We direct our attention to these [[***]] sales campaigns here for the same reason.⁴⁰³

6.193. Regarding those [[***]] sales campaigns, we recall that all the Boeing and Airbus LCA involved compete in the same product market (i.e. the single-aisle LCA product market) and are "sufficiently substitutable".⁴⁰⁴ Further, we note that the [[***]] airlines determined that they in fact required the number of single-aisle LCA that appear in the Boeing purchase agreements. We consider these factors strong evidence that each airline would likely have ordered an equal number of Airbus single-aisle LCA in the counterfactual. The United States argues, however, that the fact that Airbus proposed fewer firm orders in its relevant final offers than Boeing actually secured demonstrates that each airline would have only ordered that proposed number of LCA from Airbus. The United States presents five main arguments in support of its position.

6.194. First, and with respect to the [[***]] sales campaign, the United States argues that the airline could have wanted fewer Airbus LCA because the overall seating capacity of the Boeing LCA ordered was lower than the overall seating capacity of an equivalent number of Airbus LCA.⁴⁰⁵ At the outset, we note that the materiality of the *overall* seating capacity of the multiple LCA offered to [[***]] is not immediately apparent to us. As the United States itself notes, "airlines fly aircraft, not seats".⁴⁰⁶ Therefore, even if the overall seating capacities of the relevant Airbus and Boeing LCA would have differed somewhat, we do not consider that it necessarily follows that the airline would have wanted different numbers of LCA from the manufacturers to fly the desired routes, as the United States suggests. Insofar as [[***]] would have desired to obtain similar overall seating capacities as between Airbus and Boeing LCA, however, we consider that the evidence indicates that it is reasonable to assume that [[***]] would still have wanted the same number of LCA from Airbus and Boeing, for the reasons discussed in the following paragraph.

6.195. According to an [[***]], the [[***]] LCA ordered had a seating capacity of 153 passengers each (for a total of [[***]] seats) and the [[***]] LCA had a seating capacity of 172 (for a total of [[***]] seats).⁴⁰⁷ Although Airbus' final offer to [[***]], the European Union has provided the most "typical" seating configuration for the relevant Airbus LCA.⁴⁰⁸ A comparison of the seating capacity of the [[***]] Boeing LCA that [[***]] actually ordered and the typical seating capacity of the relevant Airbus LCA demonstrates that [[***]] would have been able to match the seating capacity

⁴⁰³ This issue [[***]] with respect to the other [[***]]. ([[***]]).

⁴⁰⁴ Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, paras. 9.33 and 9.47.

⁴⁰⁵ United States' response to Arbitrator question No. 54, para. 44.

⁴⁰⁶ United States' comments on the European Union's response to Arbitrator question No. 54, para. 64.

This means, according to the United States, that there are features other than the overall seating capacity, *per se*, that a customer would consider while placing an order such as the [[***]], factors which may, however, to some degree be linked to seating capacity.

⁴⁰⁷ [[***]].

⁴⁰⁸ The United States does not contest the correctness of the typical seating capacity of Airbus LCA provided by the European Union. Instead, the United States provides the *maximum* seating capacity for a relevant Airbus LCA model to demonstrate that that Airbus LCA would have had more seats than the Boeing LCA that [[***]] actually ordered and consequently establish that [[***]] would have ordered fewer LCA from Airbus than it did from Boeing. (United States' response to Arbitrator question No. 54, para. 44) We see little rationale for using such maximum seating capacities, given that they are in excess of not only the typical seating capacities of both the Boeing and Airbus LCA in question, but also the actual seating capacities of the Boeing LCA sold to [[***]]. (See European Union's response to Arbitrator question No. 54, paras. 100-109 table 3 (citing Panel Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, table 16); comments on United States' response to Arbitrator question No. 54, paras. 114 and 115 (making similar observations); and United States' response to Arbitrator question No. 54, fn 43) Therefore, to help ensure a fair comparison in this context, we consider it most reasonable to assume that the seating capacities of the Airbus LCA models that [[***]] would have ordered would have been their typical (and not maximum) seating capacities, which are also closer to the actual seating capacities of the Boeing LCA actually ordered.

of the Boeing aircraft only by ordering the same number of Airbus LCA as it ordered from Boeing.⁴⁰⁹ In the light of these observations, we do not consider that it has been reasonably demonstrated that [[***]] would have desired fewer LCA from Airbus than it did from Boeing for reasons relating to seating capacity.

6.196. Second, and specifically with respect to the [[***]] sales campaign, the United States notes that the airline ordered [[***]] LCA from Boeing. The United States explains that the airline ordered the "[[***]]".⁴¹⁰ Thus, Boeing [[***]].⁴¹¹ In our minds, however, this evidence indicates that the airline wanted a certain number of single-aisle LCA delivered [[***]] (which both Boeing and Airbus could accommodate), not that the airline desired a different number of LCA from Airbus and Boeing in that [[***]]. Indeed, although the United States apparently casts the sale of the [[***]] as a [[***]], we note that the airline still purchased them along with all the other [[***]] LCA. The United States also does not direct us to any evidence on the record indicating that the [[***]] LCA, once received, [[***]]. Simply put, [[***]] wanted, and received, [[***]] single-aisle LCA from Boeing. In the end, therefore, we consider that this United States argument is not pertinent to the question of whether [[***]] would have wanted a different number of Airbus LCA.

6.197. Third, the United States argues that Airbus may have lacked the production capacity to include additional orders in the counterfactual [[***]] purchase agreements, and that the presence of options in those final offers does not necessarily demonstrate the existence of sufficient additional production capacity because Boeing and Airbus [[***]].⁴¹² The United States, however, adduces no evidence indicating that Airbus in fact did lack additional relevant production capacity at any particular relevant time. We further note that the European Union has submitted a document from [[***]] at Airbus, attesting to the fact that Airbus had sufficient production capacity to satisfy orders for all of the [[***]] contained in the Airbus final offers in the [[***]] sales campaigns had the airlines [[***]].⁴¹³ The number of such [[***]] in each case was greater than the number of additional orders needed to increase the number of firm orders in the final offers to the number of firm orders that Boeing actually received in each campaign. We discern no reason to doubt the veracity of the evidence put forth by the European Union concerning Airbus' production capacity in this context, and therefore consider that it is reasonable to conclude that Airbus would have had sufficient production capacity to include additional firm orders in the [[***]] sales campaigns had they been placed by the airlines, such that Airbus could have matched the number of firm orders that Boeing secured in reality from each airline.

6.198. Fourth, the United States argues that Airbus and Boeing LCA are differentiated products featuring different technical capabilities. Aside from issues already discussed above, the United States notes that certain technical characteristics differ as between the relevant Airbus and Boeing LCA.⁴¹⁴ We discern no evidence on the record, however, indicating why [[***]] would have concluded, based upon such differences, that it would have preferred a different number of LCA from

⁴⁰⁹ The European Union performs similar comparisons in this context wherein it compares the *typical* seating capacity of the Boeing models ordered by [[***]] (which is similar to the actual seating capacities of Boeing models ordered by [[***]]) with the *typical* seating capacity of the relevant Airbus LCA, making certain assumptions about the specific Airbus LCA models that [[***]] would have ordered had it ordered additional Airbus LCA, and arrives at the same conclusion as we do in the body text above (i.e. with respect to [[***]] need to order the same number of Airbus and Boeing LCA). (European Union's response to Arbitrator question No. 54, paras. 100-109) These assumptions appear not inconsistent with how the United States itself has advocated in other contexts as to how to determine the prices of the model(s) of additional Airbus LCA that would have been ordered in the counterfactual in this sales campaign. (See United States' response to Arbitrator question No. 58, para. 57) We accordingly use the same assumptions in our calculations referenced in the body text. The United States implies at one point that the mix of additional Airbus models should be assumed to be different in this specific context, however, for reasons that are HSBI. (United States' comments on the European Union's response to Arbitrator question No. 54, para. 64, penultimate sentence) But the reasons underlying the United States' suggestion appear to indicate that the additional Airbus LCA should have [[***]] seating capacity than what we assume in our seating-capacity calculations, a reasoning that would not thus alter our relevant conclusions regarding seating capacities. Thus, we consider the United States' suggestion in this context ultimately immaterial.

⁴¹⁰ United States' response to Arbitrator question No. 54, para. 45.

⁴¹¹ United States' response to Arbitrator question No. 54, para. 45; and comments on the European Union's response to Arbitrator question No. 54, para. 65.

⁴¹² United States' response to Arbitrator question No. 50, paras. 37-39.

⁴¹³ Declaration by [[***]], 21 February 2020 ("Airbus production capacity") (Exhibit EU-66 (BCI)).

⁴¹⁴ United States' response to Arbitrator question No. 54; and comments on the European Union's response to Arbitrator question No. 54.

Airbus and Boeing. Ultimately, therefore, and in the light of the sufficiently substitutable nature of the Airbus and Boeing LCA involved, we do not consider that the existence of such technical differences is a significant consideration in this context.

6.199. Finally, the United States argues that the situation whereby an airline, after having accepted a final offer from an LCA manufacturer, would negotiate for additional firm orders between the acceptance of that final offer and the conclusion of a purchase agreement "rarely, if ever occurs".⁴¹⁵ The United States suggests that this is so because, [[***]]. Further, the negotiating parties are generally unwilling to re-open "key terms" of the deal at that stage.⁴¹⁶ The United States asserts that the European Union is in agreement as to this latter point.⁴¹⁷ The European Union responds that it is "not uncommon" that negotiations occurring after the acceptance of a final offer can lead to the parties agreeing, in a subsequent purchase agreement, to a [[***]].⁴¹⁸ The European Union also contests the United States' assertion that airlines should be expected to negotiate the number of orders down after the acceptance of the final offer, arguing that LCA manufacturers are unlikely to be misled by a customer in this manner and that such a negotiation strategy on the part of a customer may backfire and result in the entirety of the deal terms being revisited.⁴¹⁹

6.200. We note that the parties agree that, as a general proposition, negotiations between an LCA customer and LCA manufacturer continue following the submission of a final offer. Neither party argues that an increase in firm orders as a result of such continuing negotiations is common. We observe, however, that such increases do occur at times. HSBI evidence submitted by the European Union supports the European Union's assertion that, in multiple instances involving Airbus, such negotiations have led to an airline placing more firm orders for LCA than what was proposed in a preceding final offer. This has, at times, involved [[***]].⁴²⁰ We therefore note that in [[***]] sales campaigns the Airbus final offers contain [[***]].⁴²¹ The United States does not contest that, in the three instances referenced by the European Union in its HSBI evidence, the airline adjusted the number of [[***]] after the receipt of a final offer, but argues that these instances occurred over a ten-year period, and thus illustrates that [[***]].⁴²²

6.201. In the light of the above discussions, we consider that, on balance, it is reasonable to assume that, had Airbus completed its negotiations with [[***]] in the relevant sales campaigns in the counterfactual, the resulting purchase agreements would have contained a number of firm orders equal to that which appears in the corresponding Boeing purchase agreements. We recognize that such increases in firm orders (i.e. occurring after the receipt of a final offer) may be uncommon. We further note that Airbus' final offers in the [[***]] relevant sales campaigns were [[***]] based on Airbus' understanding of the airlines' needs based on, *inter alia*, input from the airlines, and competitive pressures from Boeing.⁴²³ However, we consider the demonstrated customer demand for a particular number of sufficiently substitutable Boeing single-aisle LCA compelling, particularly when coupled with the fact that post-final-offer increases in numbers of firm orders can and do in fact occur, and in the absence of any specific evidence indicating why [[***]] would have desired different numbers of Airbus LCA and Boeing LCA. Moreover, with respect to the [[***]] sales campaign, we find particularly significant evidence that [[***]] increased the number of firm orders with Boeing following Boeing's final offer.⁴²⁴ We discern nothing on the record indicating that that change was the product of factors specific to Boeing, and thus would not also have occurred in the counterfactual had Airbus won the campaign.

⁴¹⁵ Boeing E-mail regarding Question 10 (Exhibit USA-32 (BCI)).

⁴¹⁶ United States' response to Arbitrator question No. 56, para. 49 (citing Declaration of [[***]] (Feb. 28, 2020) (Exhibit USA-51 (BCI))). See also United States' comments on the European Union's response to Arbitrator question No. 53.

⁴¹⁷ United States' comments on the European Union's response to Arbitrator question No. 56, para. 66. The United States indicates that sometimes an airline may attempt to [[***]]. (Declaration of [[***]] (Feb. 28, 2020) (Exhibit USA-51 (BCI)), para. 15)

⁴¹⁸ European Union's response to Arbitrator question No. 51, para. 84. See also European Union's response to Arbitrator question No. 56.

⁴¹⁹ European Union's response to Arbitrator question No. 53.

⁴²⁰ See IndiGo, [[HSBI]] (Exhibit EU-67 (HSBI)) and IndiGo, [[HSBI]] (Exhibit EU-68 (HSBI)); [[HSBI]] (Exhibit EU-69 (HSBI)) [[HSBI]] (Exhibit EU-70 (HSBI)), and [[HSBI]] (Exhibit EU-71 (HSBI)); and Avianca [[HSBI]] (Exhibit EU-72 (HSBI)) and Avianca [[HSBI]] (Exhibit EU-73 (HSBI)).

⁴²¹ See [[***]].

⁴²² United States' comments on the European Union's response to Arbitrator question No. 56, para. 69.

⁴²³ European Union's response to Arbitrator question No. 51, para. 80.

⁴²⁴ Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), table 12; [[***]].

b. Counterfactual delivery schedules

6.202. With respect to Airbus' counterfactual delivery schedules, we have two basic choices: (a) use Boeing's actual delivery schedules in connection with the five relevant sales campaigns (as advocated by the European Union); or (b) use the delivery schedules found in Airbus' final offers in the five relevant sales campaigns (as advocated by the United States). We note at the outset that the European Union argues that the principle of "even-handedness" compels the Arbitrator to use the actual Boeing delivery schedules because the DS316 arbitrator, in the context of valuing lost sales, used the actual Airbus delivery schedules governing the relevant sales campaigns as the counterfactual Boeing delivery schedules had Boeing won the sales instead. This being the reverse situation, and as a matter of consistency as between the two arbitrations, the European Union asserts that the Arbitrator should use Boeing's actual delivery schedules.

6.203. We consider that there are material differences between the records of this arbitration proceeding and the DS316 arbitration proceeding. The DS316 arbitrator, in this context, framed its choice as between using as Boeing's counterfactual delivery schedules either the delivery schedules in the Airbus purchase agreements in the lost sales campaigns, or the delivery schedules from Boeing "comparator orders" (i.e. actual orders Boeing had secured from customers in sales campaigns deemed generally comparable to the sales campaigns at issue). The arbitrator considered that "in the absence of direct evidence of the counterfactual negotiating results {between Boeing and the customers in the relevant sales campaigns}, we consider it less problematic to use Airbus' contractual delivery schedules concluded in connection with the lost sales than using the delivery schedules of Boeing{ } in comparator orders".⁴²⁵ This was so because the actual Airbus schedules could "be reasonably assumed to reflect the actual pressures from the demand side because they have been accepted by the customers involved in the lost sales at issue".⁴²⁶ Also, the arbitrator found it "unlikely that Boeing, which has limited production capacity in a given period of time, would conclude contracts containing identical delivery schedules with multiple customers, rather than trying to sequence overall deliveries in a more even fashion over time".⁴²⁷ The arbitrator instructively noted, however, that the Airbus contractual delivery schedules had the drawback of only capturing important supply-side constraints with respect to Airbus, rather than with respect to Boeing, but "they at least represent a compromise that was acceptable to the negotiating parties at the time of order"⁴²⁸ and the arbitrator could "discern no other option for constructing Boeing's relevant counterfactual delivery schedules that, in our minds, would yield a more reliable result than using Airbus' contractually agreed delivery schedules".⁴²⁹

6.204. In contrast to the situation as described by the arbitrator in the DS316 arbitration proceeding, in this proceeding the Arbitrator has "direct evidence of the counterfactual negotiating results" between Airbus and the relevant customers in each of the specific sales campaigns at issue, i.e. the delivery schedules in the Airbus final offers. Although we recognize that these negotiating results were not final in the sense that they are contained in final offers rather than contractual purchase agreements, we note that they were the product of not only "Airbus' overall understanding of the airlines' needs" but also "feedback and active input from the airlines".⁴³⁰ In our minds, therefore, they represent a reasonably reliable indication of what the ultimate delivery schedules as between Airbus and the relevant customers would have been had Airbus completed the negotiations with the customers. We also note that the Boeing delivery schedules capture Boeing's, but, importantly, not Airbus', supply-side constraints. Thus, we consider that the delivery schedules in the Airbus final offers most reasonably capture relevant demand- and supply-side pressures, which the DS316 arbitrator indicated its desire, but inability, to do in the circumstances it faced.

⁴²⁵ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.263.

⁴²⁶ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.263.

⁴²⁷ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.263.

⁴²⁸ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.263.

⁴²⁹ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.263.

⁴³⁰ European Union's response to Arbitrator question No. 51, para. 80.

6.205. In light of the foregoing, we consider that the delivery schedules in the Airbus final offers better reflect both the demand- and supply-side pressures⁴³¹ in the relevant negotiations had Airbus won the lost sales than do the Boeing delivery schedules, and therefore it is reasonable to select them as Airbus' counterfactual delivery schedules in the circumstances before us.

6.206. We recognize that, in the immediately preceding subsection, we concluded that, in the counterfactual, Airbus would have received the same number of firm orders from each customer in all five relevant sales campaigns as Boeing did in its relevant purchase agreements, even though in the [[***]] sales campaigns Airbus proposed fewer firm orders in its final offers than Boeing secured in the purchase agreements with these customers.⁴³² Thus, with respect to these [[***]] sales campaigns, we must add an HSBI number of additional delivery slots onto the Airbus delivery schedules contained in the final offers that Airbus put forth to [[***]]. In order to do so, the United States proposes that "the Arbitrator ... calculate an average time between deliveries based on the Airbus schedule, and then assume additional deliveries at that interval following the final delivery date in the Airbus final offer".⁴³³ The United States argues that this method has the advantage of "hewing more closely to the Airbus final offers".⁴³⁴ The European Union proposes that the Arbitrator assume that Airbus would have delivered the additional aircraft "along the same delivery schedule as actual deliveries by Boeing".⁴³⁵ More specifically, for each sales campaign, the deliveries of the additional number of Airbus LCA would be assumed to be [[***]].⁴³⁶ The European Union argues that this method is preferable to the United States' approach because the European Union's method captures demand-side pressures, i.e. reflecting delivery positions that were acceptable to the relevant airlines with respect to these additional LCA.⁴³⁷

6.207. We consider the European Union's proposal reasonable and accordingly adopt it. Airbus [[***]] for the relevant additional firm orders in its relevant final offers. We observe, however, that the timing of such Boeing deliveries represented an acceptable arrangement between the negotiating parties.⁴³⁸ We further discern nothing on the record indicating to us that using the United States' approach would lead to a more reliable result.

6.4.6.4 Adjustments for actual cancellations and potential future cancellations

6.208. The European Union asserts that it is reasonable to adjust the value of orders that Airbus would have won in the counterfactual as a result of the five relevant lost sales for the risk that such orders would have been cancelled in the counterfactual, consistent with the approach used in the DS316 arbitration. The European Union addresses the risk of cancellation differently with respect to three groups of counterfactual deliveries: (a) those that would have definitely been cancelled in the counterfactual; (b) those that would have been scheduled to occur before the present day (i.e. before January 2020); and (c) those that would have been scheduled to occur after the present day (i.e. after December 2019).

6.209. With respect to the counterfactual deliveries in group (a), the European Union argues that only one counterfactual delivery associated with the 2014 Fly Dubai sales campaign would have been cancelled in the counterfactual. It acknowledges that this delivery should thus be valued at zero.⁴³⁹ With respect to remaining counterfactual deliveries falling into group (b), the European Union

⁴³¹ The supply-side pressures in this context refer to the fact that Boeing and Airbus have limited production capacity at any given point in time and thus the two LCA manufacturers may not always be able to satisfy their customers' specific demands for particular delivery schedules.

⁴³² See para. 6.201 above.

⁴³³ United States' response to Arbitrator question No. 58. See also United States' comments on the European Union's response to Arbitrator question No. 58, paras. 75-76.

⁴³⁴ United States' comments on the European Union's response to Arbitrator question No. 58, para. 76.

⁴³⁵ European Union's comments on the United States' response to Arbitrator question No. 58, para. 148. See also European Union's response to Arbitrator question No. 58.

⁴³⁶ European Union's response to Arbitrator question No. 58, tables 13 and 14.

⁴³⁷ European Union's comments on the United States' response to Arbitrator question No. 58, paras. 148-149.

⁴³⁸ See Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.263.

⁴³⁹ The European Union claims that Fly Dubai cancelled one delivery of a Boeing LCA in connection with this sales campaign "due to exogenous events in the form of airline-specific post-order decisions and actions (and not due to issues experienced by {Boeing})". (European Union's response to Arbitrator question No. 61, para. 157 (citing Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.225) (internal quotation marks omitted))

proposes that the Arbitrator assume that any order scheduled to be delivered under the Arbitrator's chosen delivery schedule up through to the present day should be assumed to already have been delivered in the counterfactual, and thus assigned a 0% risk of cancellation. With respect to remaining counterfactual deliveries falling into group (c), the European Union argues that the Arbitrator should adjust their value by multiplying the delivery price of each by a "survival rate", i.e. the chance that such deliveries would *not* be cancelled (the European Union assigns a 0% chance of cancellation to all such deliveries up through 2019). The European Union asserts that the Arbitrator should calculate that survival rate by using an average cancellation rate of Airbus single-aisle LCA models from the years 2009-2012. This method of construction is appropriate in the European Union's view because first, single-aisle cancellation rates most accurately reflect the chance that Airbus single-aisle LCA at issue would have been cancelled because historic cancellation rates for single-aisle and other types of LCA differ, reflecting different reasons as to why airlines may cancel orders of certain types of LCA. Second, the DS316 arbitrator used historic cancellation data from a period unaffected by the additional counterfactual orders placed and thus "only data from *before* the 2013 to 2015 reference period should be used for purposes of quantifying cancellation rates, actual survival rates, and estimated survival rates". This is because cancellation data taken from years in which the relevant lost sales occurred (i.e. 2013-2017) "would likely have changed in the counterfactual world, in which Airbus would have made additional sales".⁴⁴⁰ The European Union also argues, however, that "the most granular, most specific, and, indeed, most relevant historical cancellation information can be found in the *actual cancellations* that Boeing experienced in the five price-sensitive single-aisle transactions at issue".⁴⁴¹

6.210. The United States also argues that the risk of cancellations should be taken into account via the application of a survival rate applied to the delivery prices of Airbus' relevant counterfactual deliveries.⁴⁴² In contrast to the European Union's approach, the United States applies its most recent methodology in this context with reference to two, rather than three, groups of counterfactual LCA deliveries, i.e. (a) counterfactual deliveries scheduled to occur before present day (i.e. before, but not during, 2020); and (b) those that would have been scheduled to occur in and after 2020. Under the United States' most recently proposed methodology, regarding counterfactual deliveries scheduled to occur before present day (i.e. before, but not during, 2020), the United States asserts that the Arbitrator should calculate a survival rate "based on Boeing's actual experience on a per-delivery stream basis {i.e. per sales transaction at issue,} and apply this ratio to the applicable deliveries for the Airbus lost sale in the counterfactual".⁴⁴³ We note, however, that in a methodology previously proposed by the United States with respect to pre-2020 counterfactual deliveries, the United States does not contest the European Union's positions that the number of Airbus counterfactual deliveries that should be valued at zero because they would have been cancelled in the counterfactual before present day is one, and that the risk of cancellation that should be assigned to all other Airbus counterfactual deliveries that were scheduled to occur up until present day (i.e. before, but not including, 2020) under the delivery schedules in the Airbus final offers is zero.⁴⁴⁴

6.211. In its most recent methodology, regarding other Airbus counterfactual deliveries (i.e. those that would have been scheduled to occur after 2019), the United States agrees with the European Union that the Arbitrator should adjust their value by multiplying the delivery price of each by a survival rate. In this respect, the United States proposes "apply[ing] a generic Airbus survival rate"⁴⁴⁵ based on Airbus' historic cancellation rates (assigning a 0% chance of cancellation to all such deliveries up through 2019, consistent with the European Union's approach). The United States argues that the Arbitrator should construct that survival rate using an average cancellation rate of all Airbus LCA models from the years 2003-2007, i.e. "the period directly preceding the period in

⁴⁴⁰ European Union's written submission, paras. 204-205. (emphasis original)

⁴⁴¹ European Union's response to Arbitrator question No. 61, para. 177 (emphasis original). See also European Union's written submission, section II.C.2 and paras. 390, 396, 399, and 400; responses to Arbitrator question Nos. 60 and 61; and comments on United States' responses to Arbitrator question Nos. 60-65.

⁴⁴² United States' written submission, section VII.

⁴⁴³ United States' response to Arbitrator question No. 63, para. 79.

⁴⁴⁴ See also United States' response to Arbitrator question No. 20 and No. 60, paras. 65-69.

⁴⁴⁵ United States' response to Arbitrator question No. 63, para. 79. See also United States' response to Arbitrator question No. 60, paras. 64 (explaining that "the Arbitrator could reasonably rely on Airbus's experience more generally, which reflects supply-side factors influencing cancellations, or Boeing's experience for these specific sales, which in part reflects demand-side factors, to develop a theoretical cancellation rate") and 70.

which the counterfactual sales and deliveries might have been made".⁴⁴⁶ This method of construction is appropriate in the United States' view because: (a) using historic cancellation data from all Airbus LCA models is consistent with the approach used in the DS316 arbitration in which the arbitrator used historic cancellation rates for all Boeing LCA models to construct a survival rate; (b) the DS316 arbitrator used historic cancellation data from a period unaffected by the additional counterfactual orders placed and the first relevant lost sale in this proceeding was the 2008 Fly Dubai campaign; and (c) cancellation situations may occur *vis-à-vis* certain types of LCA (e.g. twin-aisle or VLA) more than single-aisle over a certain period of time but this does not mean that such LCA are necessarily prone to cancellations more than single-aisle LCA; thus, using cancellation data regarding twin-aisle LCA and VLA should not be expected to lead to an inaccurate estimated survival rate.⁴⁴⁷

6.212. The Arbitrator notes that the parties agree in principle that we should account for the risk that the relevant counterfactual Airbus deliveries (i.e. deliveries arising from the counterfactual orders that Airbus would have secured as a result of the five relevant sales campaigns) would have been cancelled. The parties differ on how to calculate and apply that risk for any given LCA delivery. In resolving these disagreements between the parties, we find it most useful to examine certain aspects of the European Union's methodology and determine whether such aspects are reasonable in the light of the record before us.

6.213. The first aspect of the European Union's methodology that we address is the assignment of a 100% cancellation risk to one counterfactual delivery in connection with the 2014 Fly Dubai sales campaign, i.e. to value one delivery at zero. The European Union asserts that we should do so because one Boeing delivery associated with that sales campaign has, in fact, been cancelled, and, further, the cancellation was due to reasons specific to the airline and unrelated to Boeing. In response, the United States asserts that whether Airbus would have made any particular delivery in the counterfactual is subject to uncertainty, and thus advocates assigning a general risk of cancellation (that takes into account the 2014 Fly Dubai cancellation) over all Airbus counterfactual deliveries instead of assigning a zero value to one specific delivery slot.⁴⁴⁸ We note that the parties agree that Fly Dubai in fact cancelled one delivery associated with the 2014 Fly Dubai lost sale. Further, the European Union has asserted that this cancellation was for reasons unrelated to Boeing, an assertion that the United States has not contested. Moreover, the Boeing and Airbus LCA at stake in this sales campaign compete in the same product market (i.e. the single-aisle LCA product market)⁴⁴⁹ and are "sufficiently substitutable".⁴⁵⁰ [[***]] We therefore consider that the European Union's assumption in this context is reasonable, i.e. Fly Dubai would have cancelled one Airbus single-aisle LCA order just as it cancelled one Boeing single-aisle LCA order.

6.214. The question thus becomes to which delivery slot in the counterfactual Airbus 2014 Fly Dubai delivery schedule to assign a zero value. The European Union has proposed assigning a zero value to the last delivery in the counterfactual 2014 Fly Dubai delivery schedule.⁴⁵¹ This is so because although "there is no overarching principle as to which delivery positions are cancelled in a sales campaign"⁴⁵², "it is often in both the airline's and Airbus' interests if the airline cancels delivery positions [[***]]" in order to give [[***]].⁴⁵³ The European Union also notes that the cancelled 737-800 was assigned to the [[***]] that Fly Dubai had ordered from Boeing in the relevant sales campaign, indicating Fly Dubai's desire to cancel later-in-time delivery positions *vis-à-vis* that LCA model.⁴⁵⁴ The United States offers no alternative delivery position for the counterfactual cancellation. To the contrary, to the extent that the United States has proposed a methodology for assigning a

⁴⁴⁶ United States' response to Arbitrator question No. 19, para. 79.

⁴⁴⁷ United States' response to Arbitrator question No. 18; No. 19; No. 33, para. 101; No. 61; and No. 62; and comments on the European Union's responses to Arbitrator question Nos. 60, 61, and 64.

⁴⁴⁸ United States' response to Arbitrator question No. 65.

⁴⁴⁹ Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 9.47(b).

⁴⁵⁰ Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 9.33. (internal quotation marks omitted)

⁴⁵¹ We note that in footnote 458 below we determine that Airbus would have delivered [[***]] in the counterfactual in connection with the 2014 Fly Dubai sales campaign.

⁴⁵² European Union's response to Arbitrator question No. 64, para. 181.

⁴⁵³ European Union's response to Arbitrator question No. 64, para. 182.

⁴⁵⁴ European Union's comments on the United States' response to Arbitrator question No. 64, paras. 210-211 (citing, *inter alia*, Ascend Database (Exhibit EU-1)).

zero value to specific deliveries due to cancellations, the United States has also chosen to value at zero delivery slots "closest to the end of {the} model's delivery schedule".⁴⁵⁵

6.215. We note that the delivery cancelled by Fly Dubai was [[***]].⁴⁵⁶ The reason for Fly Dubai's decision to cancel the specific delivery slot that it did is not on the record. We further note that Fly Dubai in fact cancelled the [[***]] that Fly Dubai ordered.⁴⁵⁷ We further consider as logical and reasonable that, as a general matter, there may be [[***]], as elucidated by the European Union. Under such circumstances, we consider the European Union's assumption that Fly Dubai would have cancelled the latest-in-time delivery of the Airbus LCA [[***]] that would have been sold in connection with the 2014 Fly Dubai sales campaign reasonable.⁴⁵⁸

6.216. In this context we also note that the United States, in its comments on the European Union's responses to the second set of Arbitrator questions, stated that "on [[***]]".⁴⁵⁹ With that submission, the United States further provided an updated proposed valuation of this [[***]] excluding the value of [[***]] deliveries to account for these [[***]].⁴⁶⁰ The United States, however, provides no evidence – and indeed, never specifically states – that these [[***]] would also have occurred in the counterfactual, i.e. that the airline [[***]] for reasons unrelated to Boeing. We thus consider that, in the light of the record before us, an assumption that such [[***]] would have occurred in the counterfactual (i.e. that the airline would have similarly [[***]] orders for Airbus LCA) is overly speculative. We accordingly decline to adopt that assumption.⁴⁶¹ We will therefore not exclude the value of those [[***]] deliveries as proposed by the United States.

6.217. The second aspect of the European Union's methodology that we address is the assignment of a 0% chance of cancellation to deliveries that would have been scheduled to occur before present day (i.e. before January 2020) in the counterfactual. The European Union argues that such deliveries should be all those that were scheduled to occur in the counterfactual before present day under the Arbitrator's chosen counterfactual delivery schedules. "This is because ... the timing of the counterfactual deliveries ... is determined by the delivery *schedules*, as contained in the final offers submitted by Airbus to the airlines at issue".⁴⁶² The United States asserts that whether Airbus would have made any particular delivery scheduled before present day in the counterfactual is subject to uncertainty, and thus advocates assigning a general risk of cancellation over all relevant Airbus counterfactual deliveries.⁴⁶³ The European Union responds that the United States' methodology is contrary to the methodology used in the DS316 arbitration, and there is no evidence that any such counterfactual delivery would have been cancelled thus warranting the application of a survival rate reflecting such a risk.⁴⁶⁴

6.218. We recall that, thus far in our analysis, we assume that Airbus would only have had one specific LCA order cancelled in connection with the five relevant lost sales (i.e. the one order in connection with the 2014 Fly Dubai sales campaign discussed above) and that we assume that this would correspond to the last delivery slot in the 2014 Fly Dubai counterfactual delivery schedule (i.e. corresponding to a delivery slot in a [[***]]). Thus, the relevant airline customers have demonstrated [[***]] a willingness to take delivery of the rest of the LCA ordered in these sales

⁴⁵⁵ United States' comments on the European Union's response to Arbitrator question No. 85, para. 214 (quoting European Union's response to Arbitrator question No. 64, para. 183) (alteration original); and Expected Value of the [[***]] Lost Sale in Order Year Dollars (Revised) (Exhibit USA 104 (HSBI)).

⁴⁵⁶ United States' response to Arbitrator question No. 65, fn 82; 2014 Fly Dubai Purchase Agreement (Exhibit USA-85 (HSBI)); Ascend Database (Exhibit EU-1); and Boeing [[***]] for 2008 Fly Dubai and 2011 Delta Sales Campaigns (Exhibit USA-87 (HSBI)).

⁴⁵⁷ Ascend Database (Exhibit EU-1).

⁴⁵⁸ The European Union assumes that [[***]] of Airbus LCA would have been ordered in the counterfactual 2014 Fly Dubai sales campaign. The United States has not argued that any other [[***]] would have been sold in this counterfactual sales campaign. We further note that certain HSBI evidence supports the assumption that [[***]] would have been ordered in this sales campaign. (See Fly Dubai 2014 final offer, [[HSBI]] (Exhibit EU-6 (HSBI)))

⁴⁵⁹ United States' comments on the European Union's response to Arbitrator question No. 85, para. 214.

⁴⁶⁰ Expected Value of the [[***]] Lost Sale in Order Year Dollars (Revised) (Exhibit USA-104 (HSBI)).

⁴⁶¹ We note that our approach regarding whether to assume that certain [[***]] would have occurred in the counterfactual is consistent with the arbitrator's approach to cancellations in the DS316 arbitration. (Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. [[***]])

⁴⁶² European Union's response to Arbitrator question No. 60, para. 155. (emphasis original)

⁴⁶³ See e.g. United States' response to Arbitrator question No. 65.

⁴⁶⁴ See e.g. European Union's comments on the United States' response to Arbitrator question No. 60.

campaigns.⁴⁶⁵ Moreover, we again recall that the Boeing and Airbus LCA at stake in these sales campaigns compete in the same product market (i.e. the single-aisle LCA product market)⁴⁶⁶ and are "sufficiently substitutable"⁴⁶⁷, and that in section 6.4.6.3 above, we conclude that all five customers would have ordered the same number of single-aisle LCA from Airbus in the counterfactual as they actually ordered from Boeing. In the light of such considerations, we agree with the European Union that it is reasonable to assume that the relevant airlines would have taken delivery of the number of Airbus LCA that would have been scheduled for delivery before present day (i.e. before 2020).

6.219. The third aspect of the European Union's methodology that we address is the construction and application of a "survival rate" to the remainder of the counterfactual Airbus orders associated with the five lost sales in question. These remaining deliveries consist of the deliveries that would have been scheduled to occur after present day (i.e. after December 2019) in the counterfactual, [[***]]. The European Union and the United States agree that the Arbitrator should adjust the value of these deliveries by multiplying their delivery prices by a survival rate, i.e. the chance that such deliveries would *not* be cancelled. The parties differ, however, on how to construct that survival rate.

6.220. The survival rate's purpose is to reflect the risk of future cancellations. The question thus arises as to how best to estimate that risk. We note that the parties agree that historic cancellation data should be used to calculate that risk, but disagree regarding which historic data should be used to do so. The European Union advocates using a survival rate based on cancellations from the five sales campaigns at issue as actually experienced by Boeing or, less preferably, on the universe of single-aisle Airbus LCA cancellations in the period 2009-2012. The European Union states that the more "specific" the historical data used is to the sales campaigns at issue (with respect to, e.g. the relevant LCA models and the airlines), the more relevant and therefore accurate the estimated survival rate will be.⁴⁶⁸ The United States argues that we should base the survival rate on the universe of Airbus LCA cancellations in the time-period 2003-2007 following the methodology of the DS316 arbitrator in light of the factual similarities across the two disputes.⁴⁶⁹

6.221. We agree with the European Union that the specificity of the historic data used to construct a survival rate *vis-à-vis* the five relevant sales campaigns (in particular, and as discussed more below, with respect to the kinds of LCA at issue) is a valid consideration in meaningfully predicting additional cancellations that may occur in connection with those campaigns.⁴⁷⁰ We consider, however, that such data should also be derived from a sufficiently large sample so as to limit the influence of potential outlier data points. In our view, therefore, to best predict future cancellations we should rely on data comprising as many observations as possible and as specific to the campaigns at issue as possible. This may present a trade-off between data specificity and sample size to some degree.

6.222. We consider that a reasonable way to resolve this trade-off is by using a survival rate based on the universe of Airbus single-aisle LCA cancellations in the period 2003-2007 for three reasons. First, the universe of Airbus single-aisle LCA cancellations over a five-year time-period provides a sample size that is larger and, hence, statistically preferable to a sample size based solely on the campaigns at issue. The single-aisle Airbus LCA market provides for [[***]] cancellable deliveries from 2003-2007.⁴⁷¹ In contrast, cancellations based on Boeing's actual experience would base the survival rate on only 313 cancellable deliveries. In terms of sample size, the gains from using Airbus single-aisle cancellations in 2003-2007 are therefore very large, i.e. increasing the data set from 313 to [[***]] cancellable deliveries. The European Union further presents no specific arguments as to why the single-aisle delivery data from 2003-2007 would produce materially inaccurate results in this context.

⁴⁶⁵ We recall that we find no basis upon which to conclude that, in the counterfactual, [[***]]. (See para. 6.216 above)

⁴⁶⁶ Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 9.47(b).

⁴⁶⁷ Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), para. 9.33. (internal quotation marks omitted)

⁴⁶⁸ European Union's response to Arbitrator question No. 61, para. 175.

⁴⁶⁹ United States' response to Arbitrator question No. 19, para. 78.

⁴⁷⁰ The parties have provided no historic cancellation data organized by customer.

⁴⁷¹ Updated Historic order cancellations in the single-aisle and twin-aisle LCA markets (Exhibit EU-74 (BCI)).

6.223. Second, in terms of specificity, we consider that using historic single-aisle cancellation rates is preferable to using cancellation rates from not only single-aisle LCA but also LCA that were not found to compete in the single-aisle LCA product market (i.e. twin-aisle and VLA) in the compliance proceeding. The European Union has provided reasons why single-aisle LCA cancellation rates may differ from, for example, twin-aisle LCA cancellation rates, including the lower cost savings of single-aisle LCA cancellations for airlines relative to cancellations of larger LCA, "delivery slot pressure" due to longer production backlogs for single-aisle LCA, a larger resale market for single-aisle LCA, and greater versatility of single-aisle LCA.⁴⁷² The United States counters that cancellations occur for various reasons that do "not necessarily indicate that the relevant type of LCA is particularly prone to cancellation".⁴⁷³ We recall that single-aisle LCA comprise their own product market, i.e. twin-aisle LCA and VLA differ materially from single-aisle LCA. We therefore consider it a reasonable proposition that single-aisle LCA orders and orders for other types of LCA may be cancelled for different reasons. The available evidence suggests that this may in fact be the case; over the last 20 years Airbus single-aisle cancellation rates were (often significantly) lower in almost all years.⁴⁷⁴ We further observe that using the universe of all Airbus LCA cancellations, as suggested by the United States, would increase the sample size from [[***]] to [[***]] possible deliveries, which represents in our view a not insignificant, but not decisive, increase in sample size. We therefore see significant potential risks and little gain from using cancellation rates involving LCA not inhabiting the single-aisle LCA product market.

6.224. Third, and finally, we consider that the time-period 2003-2007 is preferable to the time-period 2009-2012 as it provides for more data, and avoids years that might be not representative due to the impact of the financial crisis during the late 2000s and early 2010s.⁴⁷⁵

6.4.6.5 Exclusion of [[***]] from counterfactual delivery prices

6.225. As explained in section 6.1 above, the European Union proposes to value the significant lost sales and threatened impeded deliveries by basing the counterfactual prices of the relevant aircraft on the "Net Fly-Away Price" in the Airbus final offers. The Net Fly-Away Price includes the basic airframe price plus charges for changes to standard specifications and other cost elements, including [[***]], plus the engine price, less concessions, credits and purchase incentives for each of those cost elements.⁴⁷⁶ The Net Fly-Away Price is also the price that is negotiated with and presented to airline customers as part of Airbus' final offers and purchase contracts at the outset of an LCA sale, and that is subsequently escalated to the time of delivery.⁴⁷⁷ The European Union considers that the Net Fly-Away Price best measures the total value of an Airbus LCA because it is the price that an LCA customer would have paid for each aircraft in the counterfactual.⁴⁷⁸

6.226. The United States argues that the value of [[***]] should be excluded from the calculation of the counterfactual prices of the Airbus LCA. [[***]].⁴⁷⁹ Accordingly, [[***]] is not charged to customers by the aircraft manufacturer and is not recorded in the aircraft manufacturer's books as

⁴⁷² European Union's response to Arbitrator question No. 61, paras. 165-168.

⁴⁷³ United States' response to Arbitrator question No. 61, para. 71 (citing Declaration of [[***]] (Feb. 28, 2020) (Exhibit USA-51(BCI), para. 10)).

⁴⁷⁴ Updated Historic order cancellations in the single-aisle and twin-aisle LCA markets (Exhibit EU-74 (BCI)).

⁴⁷⁵ Our methodology in this context closely follows that applied by the DS316 arbitrator in its valuation of lost sales, although the United States has noted that the DS316 arbitrator used historical cancellation rates from all LCA product markets (rather than just the single-aisle product market) to construct a survival rate. We note, however, that there are material differences between this arbitration and the DS316 arbitration in this context. For instance, the DS316 arbitrator valued LCA inhabiting more than one LCA product market, whereas we value LCA inhabiting just one (i.e. the single-aisle product market). Moreover, we note that, unlike here, in the DS316 arbitration the parties engaged in no substantive debate regarding whether to use product-market-specific historic cancellation rates to construct the survival rate, and thus the arbitrator was not called on specifically to engage with that issue. (Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft* (Article 22.6 – EU), section 6.3.4.3.4.2)

⁴⁷⁶ See Panel Reports, *US – Large Civil Aircraft* (2nd complaint) (Article 21.5 – EU), paras. 9.49-9.50; and *US – Large Civil Aircraft* (2nd complaint), para. 7.1693.

⁴⁷⁷ European Union's response to Arbitrator question No. 23, para. 92.

⁴⁷⁸ European Union's comments on the United States' response to Arbitrator question No. 78, para. 422.

⁴⁷⁹ The United States has submitted evidence describing [[***]]. (Shannon Ackert, *Commercial Aspects of Aircraft Customization*, Aircraft Monitor (2013), p. [[***]] (Exhibit USA-15)) The European Union advises that, for Airbus, [[***]] covers all types of costs in connection with airline-specific choices [[***]]. (European Union's response to Arbitrator question No. 23, para. 90)

revenue. The United States considers that, because the value of [[***]] is not revenue that Airbus would potentially have received if it had won the relevant sales campaigns in the counterfactual, it should be excluded from the counterfactual prices of the Airbus aircraft.⁴⁸⁰ The United States' argument is based on the proposition that the value of a lost sale or threatened delivery of an LCA is determined from the perspective of the aircraft manufacturer, and, importantly, that this perspective is captured by measuring the aircraft manufacturer's expected revenues in the counterfactual.⁴⁸¹ The United States also argues that, in the DS316 arbitration, [[***]] was excluded from the value of the counterfactual aircraft prices because [[***]] was not part of the revenue recognized from the sale of LCA from Boeing's perspective.⁴⁸²

6.227. In response, the European Union submits that the focus of the valuation of the product that would have been sold in the counterfactual must be on the product at issue, namely, Airbus LCA, and that this is confirmed by both the findings of the DS316 arbitrator and the "logic" of the LCA market.⁴⁸³ More specifically, the European Union argues that the relevant portions of the DS316 arbitrator's decision make clear that the adverse effects determined to exist in that dispute related to a specific product (Boeing LCA) and not particular components thereof.⁴⁸⁴ Additionally, the European Union notes that a fundamental aspect of the LCA business model is revenue-sharing, according to which an LCA manufacturer assembles and delivers an LCA, collects the sales price, and passes a portion of the proceeds back to certain suppliers. Whether revenue is directly passed to the supplier without going through the LCA manufacturer's accounts, or is first recorded as revenue in Airbus' financial accounts before being passed through to suppliers is, according to the European Union, irrelevant to the valuation of the adverse effects to the European Union's interests resulting from the WTO-inconsistent subsidies at issue.⁴⁸⁵

6.228. The issue before the Arbitrator is whether we should exclude the value of [[***]] from the "Net Fly-Away Price" in the Airbus final offers that will be used to calculate the counterfactual prices of the relevant Airbus LCA when valuing the lost sales and threatened impeded deliveries.

6.229. We begin by observing that the United States in this dispute caused adverse effects to the interests of the European Union through the economic impact of the Washington State B&O tax rate reduction on Airbus' orders and deliveries of LCA, the product at issue in this proceeding. We value the adverse effects determined to exist from Airbus' perspective as a reliable assessment of the adverse effects sustained by the European Union in the same way, and for the same reasons, that the DS316 arbitrator assessed the adverse effects sustained by the United States in the DS316 arbitration proceeding by valuing the adverse effects determined to exist from Boeing's perspective.⁴⁸⁶

6.230. The adverse effects in this dispute concern LCA sales campaigns that Airbus lost, which resulted in orders that Airbus did not secure and in deliveries that Airbus would not make in the

⁴⁸⁰ United States' written submission, para. 143; and response to Arbitrator question No. 78, para. 133.

⁴⁸¹ The United States argues that "the revenue that Boeing or Airbus, as the LCA manufacturer and seller, realizes from the sale of an LCA is the proper measure of the delivery value of an LCA for purposes of this arbitration." (United States' response to Arbitrator question No. 78, para. 131)

⁴⁸² The United States argues that the inclusion of [[***]] in the valuation of the counterfactual sales would instead reflect the total value of the sales from the perspective of (multiple) customers. (United States' response to Arbitrator question No. 78, para. 132)

⁴⁸³ European Union's comments on the United States' response to Arbitrator question No. 78, para. 416.

⁴⁸⁴ European Union's written submission, paras. 238-240; and comments on the United States' response to Arbitrator question No. 78, paras. 417-418. The European Union argues that the DS316 arbitrator did not make any decision to include or exclude [[***]] from the counterfactual prices of Boeing LCA in that proceeding because the Boeing comparator prices presented by the United States in that proceeding did not include [[***]] and the European Union did not object to the United States' decision not to include [[***]] in those prices. (European Union's response to Arbitrator question No. 26, paras. 108-109) The European Union contends that in any case, multiple customer cost items that Airbus typically considers part of [[***]] appear to be excluded from the [[***]] category by Boeing. (European Union's response to Arbitrator question No. 23, paras. 94, 97, and 99; and No. 26, para. 111)

⁴⁸⁵ European Union's comments on the United States' response to Arbitrator question No. 78, para. 421.

⁴⁸⁶ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.220. We note that Article 5(c) of the SCM Agreement provides that "{n}o Member should cause, through the use of any subsidy ... adverse effects to the interests of other Members", including "serious prejudice to the interests of another Member". The adopted findings in this dispute indicate that the Washington State B&O subsidy "cause{d} serious prejudice to the interests of the European Union". Those findings do not mention Airbus' commercial interests. (Panel Report, *US – Large Civil Aircraft (2nd complaint)* (Article 21.5 – EU), paras. 9.486(b) and 9.487(b))

future. It is logical that a valuation of those lost sales and threatened impeded deliveries should be based on the counterfactual "prices" of the relevant Airbus LCA. The compliance panel discussed various aspects of LCA prices, noting that they comprise numerous elements, including airframes, changes to standard specifications, buyer furnished equipment, and engines, and that some of those elements are negotiated with the airframe manufacturers, while others are negotiated directly with the relevant suppliers.⁴⁸⁷

6.231. As previously noted, the European Union proposes that we use the Net Fly-Away Price that appears in the Airbus final offers for the relevant sales campaigns to calculate the counterfactual price of the relevant Airbus LCA. The Net Fly-Away Price is the price negotiated with, and ultimately presented to, Airbus customers as part of Airbus' final offers. It is also the price on which the customer bases its economic evaluations of Airbus' proposal to arrive at an assessment of the NPV of that proposal.⁴⁸⁸

6.232. The United States does not dispute that the Net Fly-Away Price is the appropriate price on which to base the value of the lost sales and threatened impeded deliveries, other than the fact that this price *[[***]]*, which the United States argues should be subtracted from the Net Fly-Away Price. The United States' argument that *[[***]]* should not be part of the counterfactual delivery prices appears to rest on the proposition that only the price elements that are directly recorded as revenue by Airbus should be included in the valuation of the adverse effects in this proceeding. The United States considers that this proposition was accepted by the DS316 arbitrator when it used the "Boeing Net Price" to calculate the value of the counterfactual Boeing lost sales and impeded deliveries in that dispute, given that the Boeing Net Price does not include *[[***]]*.⁴⁸⁹

6.233. In the DS316 arbitration, the United States proposed to value the lost sales and impeded deliveries by basing the counterfactual delivery prices of the relevant aircraft on the "Boeing Net Prices". When discussing the United States' response to the European Union's arguments regarding the appropriate Boeing comparator orders in that proceeding, the DS316 arbitrator observed (but not as part of any reasoning resolving any disagreement between the parties) that the United States had asserted that *[[***]]*.⁴⁹⁰ It is true that the DS316 arbitrator accepted the United States' proposal to base the counterfactual delivery prices in that proceeding on the Boeing Net Price, but there is no indication in the decision that this was because the Boeing Net Price excluded *[[***]]*, or because the DS316 arbitrator considered that the counterfactual delivery prices should include only price elements that are directly recorded as revenue by the aircraft manufacturer.

6.234. On the contrary, the Boeing Net Price, like the Airbus Net Fly-Away Price, *included* the price of engines.⁴⁹¹ Engines are generally contracted for separately between the airline customer and engine supplier.⁴⁹² The European Union in the DS316 arbitration proceeding did not argue that the counterfactual delivery prices of the Boeing comparator aircraft should exclude the cost of engines. However, if the DS316 arbitrator had sought to value the relevant Boeing LCA on the basis of the

⁴⁸⁷ Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, paras. 9.49-9.51.

⁴⁸⁸ See Panel Reports, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, paras. 9.20-9.21; and *US – Large Civil Aircraft (2nd complaint)*, para. 7.1694. This is also evident from the compliance panel's evaluations of the effects of the Washington State B&O tax rate reduction on the outcomes of the sales campaigns in the HSBI Appendix to the compliance panel report. (See e.g. Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, Appendix 2, fns 570-571)

⁴⁸⁹ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, paras. 6.274 and 6.466.

⁴⁹⁰ European Union's written submission, fn 324; and response to Arbitrator question No. 26, para. 108 (citing Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.282). (emphasis omitted)

⁴⁹¹ The Boeing Net Price is the "Boeing Gross Price" minus any price concessions (i.e. discounts to the gross price offered by Boeing which are expressed in purchase agreements with the customer as a discount from the base-year gross price). The Boeing Gross price, in turn, includes the airframe price and the engine price. (United States' response to Arbitrator question No. 79, paras. 135-136)

⁴⁹² The United States notes that there may not always be separate contracting for engines, particularly where there is no choice of engine for a particular model. (United States' response to Arbitrator question No. 21, para. 83) Engines are manufactured by engine manufacturers, are not part of the airframes manufactured by Airbus and Boeing, and generally (but not always) are not part of the airframe price. The original panel noted that, in many cases, neither the airline customer nor the engine manufacturer discloses the engine price to the airframe manufacturers. Additionally, the original panel noted that engines are the single most expensive component of an LCA, representing between 20% and 30% of its total cost. (Panel Report, *US – Large Civil Aircraft (2nd complaint)*, para. 7.1690)

revenues recognized by Boeing when it sold such LCA, it stands to reason that it would have determined whether Boeing recognized revenues from engine sales and would have expressly included the value of engines in the counterfactual delivery prices, or excluded the value of engines from those prices, on the basis of that determination. The United States in this proceeding has also not specifically argued that we should subtract the cost of engines from the Net Fly-Away Price.⁴⁹³

6.235. Even leaving aside whether Airbus' revenue recognition practices differ as between engine sales and [[***]], we remain unconvinced, more generally, by the United States' argument that "what should be understood as part of {an} LCA product is evidenced by what is included in the revenue recognized by the LCA manufacturer in the sale of the LCA".⁴⁹⁴ The manufacture of an LCA is an immensely complex process from engineering, supply-chain, and financial perspectives, involving not just the LCA manufacturer but also manufacturers of engines, of sub-assemblies, and of all other parts and components incorporated into the aircraft.⁴⁹⁵ Based on the evidence before us, and on our understanding of the LCA industry as reflected in the reports of the original and compliance panels, we are not persuaded by the United States' proposition that the revenue recognized by the LCA manufacturer (in this case Airbus) in relation to the production of any specific model of LCA is necessarily dispositive of whether a given element of the LCA price should be included in the counterfactual delivery prices of the LCA that comprise the lost sales and threatened impeded deliveries in this proceeding. As explained above, the focus of our valuation centres on the product at issue, Airbus LCA and the adverse effects sustained by the European Union. The United States has not explained how focusing instead on revenues to the LCA manufacturer would lead to a more reasonable valuation of a product manufactured by means of several complex commercial arrangements, including cost-sharing arrangements with certain suppliers. Thus, we fail to see an objective basis as to why our valuation of the relevant lost sales or threatened impeded deliveries should be affected by Airbus' accounting treatment of elements of the LCA price that a customer pays.⁴⁹⁶ We find support for our view in the DS316 arbitrator's refusal to exclude the value of non-US LCA inputs incorporated into Boeing LCA from the maximum level of countermeasures, in part because doing so would be "exceedingly complicated" since LCA production is reliant on "complex and dynamically optimized international supply chains".⁴⁹⁷

6.236. In conclusion, we consider that excluding the value of [[***]] from the "Net Fly-Away Price" in the Airbus final offers that will be used to calculate the counterfactual prices of the relevant Airbus LCA when valuing the lost sales and threatened impeded deliveries, as proposed by the United States, would be inconsistent with the degree and nature of the adverse effects determined to exist, as sustained by the European Union. We therefore reject the United States' proposal in this context.

6.4.6.6 Remaining issues regarding counterfactual delivery prices

6.237. In this section, and taking into account the decisions that we have made in this Decision thus far, we describe the European Union's methodology to determine the counterfactual delivery prices of the Airbus aircraft from the five sales campaigns, in delivery-date US dollar terms, using information contained in the Airbus final offers. The United States does not contest this aspect of the European Union's methodology with respect to the large majority of Airbus LCA that would have been sold in the counterfactual had Airbus won the five relevant sales campaigns.

⁴⁹³ United States' response to Arbitrator question No. 21, para. 82. This is significant, in our view, because the European Union's definition of "LCA" for purposes of this dispute, as specified in fn 4 to the European Union's panel request in the original proceedings, *excludes* engines. (See Panel Report, *US – Large Civil Aircraft (2nd complaint)*, para. 2.1 at fn 20; and Appellate Body Report, *US – Large Civil Aircraft (2nd complaint)*, para. 1 and fn 3 thereto. See also fn 2 above.) By contrast, there is no equivalent definition of LCA in the United States' panel request in the DS316 proceedings. (See WT/DS316/2; and Panel Report, *EC and certain member States – Large Civil Aircraft*, para. 2.1)

⁴⁹⁴ United States' response to Arbitrator question No. 78, para. 131.

⁴⁹⁵ For example, as regards the design, manufacture, and assembly of the Boeing 787, the original panel in this dispute discussed in some detail Boeing's focus on completion of sub-assemblies and integration of systems designed and manufactured by third-party suppliers, many of which were risk-sharing partners. (See Panel Report, *US – Large Civil Aircraft (2nd complaint)*, Appendix VII.F.1, paras. 24-25)

⁴⁹⁶ The European Union has explained, for example, that its revenue recognition practices as regards [[***]] will often differ depending on whether the customer is an airline or a leasing company. (European Union's comments on the United States' response to Arbitrator question No. 78, para. 420)

⁴⁹⁷ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, paras. 6.145 and 6.148.

6.238. To determine delivery-date prices, the European Union applies two components found in a given final offer *vis-à-vis* the LCA model(s) contained in that final offer that were the subject of proposed firm orders. The first component is the Net Fly-Away Price which is the total aircraft price minus all price concessions extended to the customer as agreed at the time of order.⁴⁹⁸ The European Union uses the Net Fly-Away Price as found in Airbus' final offers. The second component is an escalation formula that brings the order price forward to the delivery date.⁴⁹⁹ As explained by the European Union, the escalation formula "reflects the fact that there is typically a considerable time lag between the order of an LCA and its delivery"⁵⁰⁰ and is "designed to offset the increase in labour and material costs over time, which result from inflation and other economic changes".⁵⁰¹ Each Airbus final offer also contains an escalation formula. The escalation formula produces an escalation factor that transforms Net Fly-Away Prices in base date *b* prices into delivery date *d* prices and can be applied as follows⁵⁰²:

$$\begin{aligned} \text{AirbusNetFlyAwayPrice}_{\text{Airline } i, \text{LCA model } m, \text{delivery date } d}^{\text{in delivery date } d \text{ USD}} \\ = (\text{AirbusTotalAircraftPrice}_{\text{Airline } i, \text{LCA model } m, \text{order date } o}^{\text{in base date } b \text{ USD}} \\ - \text{Concessions}_{\text{Airline } i}^{\text{in base date } b \text{ USD}}) \times \text{EscalationFactor}_{\text{Airline } i, \text{delivery date } d} \\ - \text{Other concessions}_{\text{Airline } i}^{\text{in base date } b \text{ USD}}, \end{aligned} \quad (1)$$

where

$\text{AirbusTotalAircraftPrice}_{\text{Airline } i, \text{LCA model } m, \text{order date } o}^{\text{in base date } b \text{ USD}}$: total aircraft price of Airbus model *m* competing in sales campaign with airline *i* lost to Boeing at order date *o* and expressed in US dollar terms of base date *b*.⁵⁰³

$\text{Concessions}_{\text{Airline } i}^{\text{in base date } b \text{ USD}}$: price concessions contained in final offer by Airbus to airline *i* in US dollar terms of base date *b* and [[***]].

$\text{OtherConcessions}_{\text{Airline } i}^{\text{in base date } b \text{ USD}}$: price concessions contained in final offer by Airbus to airline *i* in US dollar terms of base date *b* but [[***]].

$\text{EscalationFactor}_{\text{Airline } i, \text{delivery date } d}$: escalation factor for delivery date *d* calculated using the escalation formula contained in Airbus' final offer to airline *i* in sales campaign lost to Boeing.⁵⁰⁴

6.239. As can be seen from Equation (1), the Net Fly-Away Price expressed in delivery-date US dollar terms is obtained by deducting price concessions, [[***]], from the total aircraft price set by Airbus in its final offer to airline *i* in the sales campaign at issue, both expressed in base-date US dollar terms, multiplied by the escalation factor corresponding to delivery date *d* minus additional concessions expressed in base-date US dollar terms, [[***]]. The escalation formula that leads to the escalation factor is [[***]].

6.240. Equation (1) requires information on the delivery date of each aircraft. As per section 6.4.6.3 on counterfactual delivery schedules, this information is available in the final offers by Airbus to airline *i* for each of the relevant sales campaigns. The final offers also contain the required

⁴⁹⁸ For additional information about the Net Fly-Away Price, see para. 6.225 above.

⁴⁹⁹ European Union's methodology paper, paras. 93-95.

⁵⁰⁰ European Union's methodology paper, para. 93.

⁵⁰¹ European Union's methodology paper, para. 93. See also Panel Report, *US – Large Civil Aircraft (2nd complaint) (Article 21.5 – EU)*, fn 3383. "The European Union explains that pricing escalation is used by Airbus and by Boeing to reflect increased costs in the same period. An escalation formula is applied to aircraft pricing to reflect changing costs and economic conditions over time." (Ibid.)

⁵⁰² Equation 1 takes into account that [[***]].

⁵⁰³ The base date does not necessarily correspond to [[***]].

⁵⁰⁴ Escalation factors are available at a monthly frequency. However, for simplicity the European Union assumes that all deliveries take place in July of any given year. (See European Union's methodology paper, fn 149)

information on Net Fly-Away Prices, LCA models, and the escalation formula. The escalation factor, which is based on the formula, becomes known only at the delivery date when [[***]].⁵⁰⁵

6.241. As previously noted, the United States does not contest the above-described methodology. We note that this methodology is also conceptually in line with the approach used in the DS316 arbitration with differences arising only where the facts of the disputes require it. We further see no reason to question its validity. We accordingly adopt this approach as reasonable for determining the delivery prices of counterfactual Airbus deliveries resulting from the five relevant sales campaigns.

6.242. We recall, however, that, as explained in section 6.4.6.3 above⁵⁰⁶, we must add an HSBI number of additional firm orders to [[***]] of the Airbus final offers, i.e. those for the [[***]] sales campaigns.⁵⁰⁷ The United States and European Union have presented two alternative ways of determining the Net Fly-Away Prices of the additional firm orders.⁵⁰⁸ However, under the valuation framework that we have adopted thus far, the parties' proposed methods lead to the same ultimate valuation of [[***]].⁵⁰⁹ We therefore need not choose between the parties' methodologies in this context. Instead, as we discern nothing unreasonable about the valuation that the parties' methodologies achieve, we adopt such valuations in this context.⁵¹⁰

6.4.6.7 Summary of conclusions on technical issues common to the valuations of both forms of adverse effects

6.243. In this section, we summarize our conclusions regarding the technical issues common to the valuation of both forms of adverse effects.

6.244. We conclude that the relevant **counterfactual from the compliance proceedings** was that, absent the Washington State B&O tax rate reduction, Airbus would have won the five LCA sales campaigns. We therefore reject the United States' proposal to include in our valuation of the adverse effects a probabilistic adjustment to the expected value of the sales campaigns to account for the alleged uncertainty of Airbus winning those sales campaigns in the counterfactual.

6.245. We also conclude that **options** clauses, whether exercised or not, are outside the scope of the compliance panel's relevant lost-sales findings, and accordingly decline to consider options, whether exercised or not, in the Arbitrator's determination of a maximum level of Annual Suspension.

6.246. As regards the **number of firm orders** that Airbus would have received in the five relevant sales campaigns in the counterfactual, and their respective **delivery schedules**, we conclude that:

- a. it is reasonable to assume that, in the counterfactual, Airbus would have secured the same number of firm orders in its purchase agreements in all five relevant sales campaigns as Boeing secured in its actual purchase agreements;
- b. the delivery schedules in the Airbus final offers better reflect both the demand- and supply-side pressures in the relevant negotiations had Airbus won the sales campaigns than do

⁵⁰⁵ European Union's methodology paper, fn 153. Information on realized and forecasted escalation factors is available in Updated LCA indices, escalation rates and Airbus LCA Inflation Index. (Exhibit EU-83 (HSBI))

⁵⁰⁶ See para. 6.206 above.

⁵⁰⁷ The limited applicability of this issue [[***]] is the result of the decisions taken by the Arbitrator on options in section 6.4.6.2 above.

⁵⁰⁸ See United States' response to Arbitrator question No. 58; European Union's response to Arbitrator question No. 58; and 2RPQ valuation of single-aisle lost sales – Airbus delivery schedules (Exhibit EU-85 (HSBI)).

⁵⁰⁹ That is, we obtain the same value for significant lost sales, indicated in para. 6.304 below, with either method.

⁵¹⁰ Technically, we follow the methodology proposed by the European Union to determine the Net Fly-Away Prices of the additional firm orders. We then apply the European Union's otherwise uncontested methodology described in the body text above to reach delivery-date prices. That is, we escalate the prices using the escalation formulae in the applicable final offers up to the delivery times determined in section 6.4.6.3 above.

the Boeing delivery schedules and we therefore select the delivery schedules in the Airbus final offers as Airbus' counterfactual delivery schedules; and

- c. the delivery of the additional number of Airbus LCA is assumed to be [[***]].

6.247. As regards the calculation and application of the **risk** that the relevant counterfactual Airbus deliveries would have been **cancelled**, we make the following assumptions:

- a. Fly Dubai would have cancelled one Airbus single-aisle LCA order had Airbus won the 2014 Fly Dubai sales campaign, just as it cancelled one Boeing single-aisle LCA order, and the cancelled order would have been the latest-in-time delivery of the Airbus LCA [[***]] that would have been sold in connection with the 2014 Fly Dubai sales campaign⁵¹¹;
- b. each relevant airline would have taken delivery of, at least, the number of Airbus LCA that would have been scheduled for delivery before present day (i.e. before 2020); and
- c. for the counterfactual Airbus orders associated with the five lost sales where the counterfactual deliveries are scheduled to occur after the present day (i.e. after 2019), we apply a survival rate to take into account the risk of future cancellations which is based on the universe of Airbus single-aisle LCA cancellations in the period 2003-2007.

6.248. It is reasonable to value the lost sales and threatened impeded deliveries by basing the **counterfactual delivery prices** of the relevant Airbus aircraft on the Net Fly-Away Prices in the Airbus final offers. We reject the United States' proposal to exclude the value of [[***]] from the counterfactual prices of the Airbus LCA.

6.249. Finally, the formula used to determine the delivery-date prices of the Airbus LCA that would have been ordered in the counterfactual, based on the Net Fly-Away Prices in the relevant Airbus final offers, is specified in section 6.4.6.6 above.

6.4.7 Technical issues regarding the valuation of significant lost sales

6.250. In this part of the Decision, we address technical aspects of the European Union's methodology that are specific to the valuation of adverse effects in the form of significant lost sales. These relate to: (a) how to temporally adjust counterfactual delivery prices back to the time of the lost sale; (b) how to express the values of the significant lost sales on a common monetary basis; and (c) the appropriate temporal period with which to annualize the aggregated value of the lost sales. We address each in turn.

6.4.7.1 Temporal adjustment of delivery prices to the time of the lost sales

6.251. As explained in section 6.1 above, the penultimate step in the European Union's valuation methodology with respect to lost sales consists of (a) discounting the value of the counterfactual delivery prices of scheduled LCA deliveries (i.e. in delivery-date US dollar terms) back to the date at which the relevant order was lost (i.e. in order-date US dollar terms), and (b) subsequently aggregating the discounted prices to generate the order-date value of each lost sale.⁵¹²

6.252. The European Union argues that the discounting exercise should be performed from the perspective of the LCA manufacturer, and that Airbus' cost of debt (expressed as euro-denominated ten-year Airbus bond yield rates) is an appropriate discount rate for the valuation of lost sales in this proceeding.⁵¹³ The European Union submits that its position is consistent with the DS316 arbitrator's use of Boeing's cost of debt with a ten-year maturity to discount the delivery-date prices in that proceeding, and that using the cost of debt is therefore mandated by the notion of even-

⁵¹¹ We decline to assume that [[***]], just as it [[***]], and therefore do not exclude the value of those [[***]] as proposed by the United States. (See para. 6.216 above)

⁵¹² European Union's written submission, para. 396.

⁵¹³ European Union's written submission, para. 396; and response to Arbitrator question No. 75, para. 432; and No. 28, para. 118.

handedness.⁵¹⁴ Alternatively, the European Union argues that another suitable discount rate is the ALII, which is an index compiled by the European Union based on Airbus' contractual escalation rates representing [[***]] changes in labour and materials costs resulting from inflation and other economic changes.⁵¹⁵

6.253. The United States objects to the discount rates proposed by the European Union, arguing that Airbus' WACC is a better indicator of the time value of money from Airbus' perspective.⁵¹⁶ In particular, the United States asserts that, unlike the cost of debt, the WACC adequately measures Airbus' overall opportunity cost of capital (i.e. from both debt and equity) when investing in the production of LCA and deferring full payment for the LCA until delivery.⁵¹⁷ The WACC is broadly used as a discount rate to determine the present value of a company's average-risk projects.⁵¹⁸ Thus, since the business valuation of an aircraft manufacturer is itself based on selling and delivering LCA, the United States argues that Airbus' WACC is a relevant metric to discount the value of the sales campaigns at issue.⁵¹⁹

6.254. The European Union responds that, while the WACC may befit present value determinations of macro-level projects involving significant long-term risks⁵²⁰, it is not suited to discount the value of the lost sales at stake in this proceeding, which (compared to such macro-level projects) represent "relatively small-scale investments with low transaction-specific risk", especially when the risk of cancellation is addressed separately.⁵²¹ Accordingly, the European Union considers that the WACC is excessively high as a discount factor because it accounts for risks that are not presented by or relevant to the LCA deliveries associated with the lost sales. It thus argues that using the WACC would therefore artificially depress the order-date value of the lost sales.⁵²²

6.255. The Arbitrator notes that the parties' disagreement as to the choice of a discount rate requires that we assess, in light of the evidence before us, whether the discount rate applied by the European Union – i.e. Airbus' cost of debt – is reasonable to determine the value of the counterfactual delivery prices of scheduled LCA deliveries at the time the relevant order was lost. We start by noting that, consistent with the approach taken in the DS316 arbitration, the European Union asserts that an appropriate discount rate should reflect the LCA manufacturer's perspective. It further asserts that, in so doing, the discount rate used should capture Airbus' risks associated with realizing future revenue streams in an LCA-sales-contract scenario with a view to determining the present value of those revenue streams, i.e. at the time of order. The European Union identifies two key factors that a discount rate should capture in this context: (a) the risk that inflation may erode the value of Airbus' future revenue streams relative to the order date, and (b) the "opportunity cost" to Airbus of waiting to receive the payment linked to the delivery of the ordered aircraft.⁵²³ We understand "opportunity cost" in this context as meaning the potential

⁵¹⁴ European Union's response to Arbitrator question No. 17, paras. 79, 82, and 85 (referring to Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, paras. 6.345 and 6.352-6.354).

⁵¹⁵ European Union's methodology paper, para. 101; and response to Arbitrator question No. 27, para. 114; and No. 75, paras. 392 and 443.

⁵¹⁶ United States' written submission, paras. 112-121.

⁵¹⁷ United States' opening statement at the meeting of the Arbitrator with the parties, para. 56; and comments on the European Union's response to Arbitrator question No. 75, paras. 193-194 (referring to Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.344).

⁵¹⁸ United States' comments on the European Union's response to Arbitrator question No. 75, paras. 201-202 (referring to Brealey, Myers, and Allen, *Principles of Corporate Finance*, 9th Edition, p. 239 (Exhibit USA-99)).

⁵¹⁹ United States' comments on the European Union's response to Arbitrator question No. 75, para. 201 (referring to European Union's response to Arbitrator question No. 75, para. 391).

⁵²⁰ European Union's response to Arbitrator question No. 75, para. 413 (referring to Daves, Philip R.; Michael C. Ehrhardt and Robert A. Kunkel, 2002, "Estimating systematic risk: the choice of return interval and estimation period", *Journal of Financial and Strategic Decision*, volume 13, number 1, pp. 7-13 (Exhibit EU-79)).

⁵²¹ European Union's response to Arbitrator question No. 75, paras. 411-418.

⁵²² European Union's response to Arbitrator question No. 75, para. 421.

⁵²³ European Union's response to Arbitrator question No. 75, paras. 394, 396, and 434 (citing Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, paras. 6.343-6.344, 6.350, and 6.348). We note that the DS316 arbitrator recognized that an LCA manufacturer also faces the risk that the order may be cancelled, and that the future revenue streams may thus never be realized, but the arbitrator made separate adjustments for this risk by using a survival rate. As discussed in section 6.4.6.4

benefits that Airbus foregoes when it allocates capital to the production of ordered LCA and waits to receive the payment for the production and delivery of those LCA, rather than putting those funds to alternative potential uses.⁵²⁴ We note that, because riskier projects demand higher rates of return, risks play an important role in determining the opportunity cost associated with a project.⁵²⁵ As presented by the European Union, specifically, the level of "opportunity cost" to be accounted for in the choice of a discount rate depends on the risks arising in an LCA-sales-contract scenario *in addition* to inflation (but excluding the risk of cancellation of the orders, as we have accounted for that risk separately). The United States does not contest these assertions, and we discern no reason to question them. We thus proceed to examine whether the European Union has proposed a discount rate that reasonably captures the risk of inflation and opportunity cost, as the European Union uses those terms.

6.256. The European Union submits that Airbus' cost of debt effectively captures the two key factors that must be considered in this context (i.e. expected inflation and the opportunity cost).⁵²⁶ As support for using the cost of debt, the European Union also adduces evidence of Airbus' historic debt financing costs and of the nominal interest rates in Europe for the years 2005 to 2018. Based on the DS316 arbitrator's explanation that a nominal interest rate captures expected inflation, the European Union argues that the relative proximity between the values of the two metrics (cost of debt and the nominal interest rate) further supports using the cost of debt as a discount rate.⁵²⁷ We note that the value of Airbus' cost of debt was higher than the nominal interest rate in both of the years in which the relevant two orders occurred.⁵²⁸ Thus, it appears reasonable to conclude that Airbus' cost of debt effectively captures *not only* the nominal interest rate (i.e. expected inflation) but also some level of opportunity cost. Additionally, neither party has produced any evidence or argumentation specifically indicating that Airbus' cost of debt inappropriately captures Airbus' relevant opportunity cost in individual sales (i.e. reflecting estimated risks additional to inflation).⁵²⁹ In the light of such considerations using Airbus' cost of debt as the relevant discount rate in this context appears reasonable.⁵³⁰

6.257. We recall that the United States argues that the WACC properly measures Airbus' overall opportunity cost of capital when investing in the production of LCA and deferring full payment of the LCA until delivery.⁵³¹ The United States also explains that, because the WACC is intended to serve as a discount rate to value a company's average-risk projects, it should be used in this context since the valuation of an aircraft manufacturer is itself based on selling and delivering LCA.⁵³² The European Union argues that the WACC encompasses risks that are not pertinent to individual sales transactions, which are "relatively small-scale investments with low transaction-specific risk", particularly when divorced from the risk of cancellation.⁵³³ The European Union provides examples of risks incorporated into the WACC that it states do not specifically arise in individual sales and that

above, we adjust the value of orders that Airbus would have won in the counterfactual taking into account the risk of cancellation in the counterfactual. Thus, consistent with the approach of the DS316 arbitrator, we do not further consider the risk of cancellation in this section of our Decision.

⁵²⁴ See Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.345.

⁵²⁵ Brealey, Myers, and Allen, *Principles of Corporate Finance*, 9th Edition, p. 239 (Exhibit USA-99).

⁵²⁶ European Union's response to Arbitrator question No. 17, para. 82.

⁵²⁷ European Union's response to Arbitrator question No. 75, para. 434 and fn 461 thereto (referring to Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, paras. 6.348 and 6.353).

⁵²⁸ European Union's response to Arbitrator question No. 75, para. 435 and table 17 (comparing Airbus' cost of debt, WACC, ALII, and nominal interest rates (2005-2018)).

⁵²⁹ The relatively small differential between the cost of debt and the nominal interest rate appears consistent with the European Union's assertion that Airbus' relevant opportunity cost is "very low" when the risk of cancellation is accounted for separately, an assertion the United States does not specifically contest. (European Union's response to Arbitrator question No. 75, para. 402 and fn 422 thereto) We further note that the differential between the WACC and the nominal interest rate is significantly greater.

⁵³⁰ We further note that using Airbus' cost of debt would be consistent with the DS316 arbitrator's selection of Boeing's cost of debt to discount LCA delivery-year prices back to the order years when valuing significant lost sales under an identical general methodology.

⁵³¹ United States' opening statement at the meeting of the Arbitrator with the parties, para. 56; and comments on the European Union's response to Arbitrator question No. 75, paras. 193-194 (referring to Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.344).

⁵³² United States' comments on the European Union's response to Arbitrator question No. 75, para. 202 (citing Brealey, Myers, and Allen, *Principles of Corporate Finance*, 9th Edition, p. 239 (Exhibit USA-99)).

⁵³³ European Union's response to Arbitrator question No. 75, paras. 411-418.

make the WACC over-inclusive of risk in the specific circumstances of the valuation exercise before us, which, to recall, "concerns ... future cash flows from expected LCA deliveries under the individual sales campaigns at issue".⁵³⁴

6.258. We see no basis to question the accuracy of the European Union's illustration of the range of risks captured by the WACC, and the United States has not advanced any. We also concur with the European Union that it is reasonable to conclude that, once an order has been secured through an LCA sales contract, Airbus does not incur all of the same elements of risk as those reflected in the WACC.⁵³⁵ In short, therefore, we consider that the record indicates that the WACC is over-inclusive with respect to risks specific to the LCA sales at issue.⁵³⁶ We thus consider that the United States has not demonstrated that the WACC is a more reasonable discount rate than Airbus' cost of debt in this context.

6.259. Finally, we recall that the European Union has proposed using the ALII as an alternative discount rate to the cost of debt.⁵³⁷ We further recall, however, that the European Union (a) has applied Airbus' cost of debt as the relevant discount factor in its calculation methodology throughout this proceeding, and (b) has consistently argued that the notion of even-handedness requires that we use Airbus' cost of debt to ensure consistency with the DS316 arbitrator's use of Boeing's cost of debt.⁵³⁸ As a result, we do not further consider using the ALII for purposes of discounting the value of the lost sales.

6.260. For these reasons, we find Airbus' cost of debt in the form of euro-denominated ten-year Airbus bond yield rates to be a reasonable discount factor to account for Airbus' risks in producing and delivering LCA in the relevant sales campaigns before us. We therefore proceed to use it when discounting counterfactual delivery-date prices back to the relevant order-dates.

6.4.7.2 Expressing the lost sales' values on a common monetary basis

6.261. In the section immediately above, the Arbitrator determined how it will temporally adjust the delivery prices of counterfactual deliveries stemming from the Icelandair 2013, Air Canada 2013, and Fly Dubai 2014 lost sales back to the times of the respective lost sales. These values have thus far been expressed in order-date US dollars terms, depending on the date at which Airbus lost each sale, consistent with the European Union's methodology.

6.262. Against that background, in this section, we address the next step in the European Union's methodology, whereby the European Union converts the order-date values into 2015 US dollar values. The European Union submits that this is an appropriate step because putting the values of lost sales on a common monetary basis allows them to be summed and then divided by the number of months in the reference period and multiplied by 12 in order to obtain an aggregated annualized value of lost sales. That value will then be summed with the aggregated annualized value of the threat of impedance to obtain the final maximum level of Annual Suspension. The European Union argues that the common monetary basis should be the US dollar value as expressed in the final year

⁵³⁴ The European Union asserts that the WACC encompasses such risks as: profit risk to shareholders; the risk of bankruptcy for Airbus; the risk that a programme may fail due to the inability to develop the aircraft; the risk that the market may not demand as many aircraft as projected at the launch of a programme; the risks associated with the manufacture and supply of the aircraft; exchange-rate risks; and political risks. The European Union additionally asserts that building a new production facility or launching a new LCA programme are examples of investments for which use of the WACC would be appropriate. (European Union's response to Arbitrator question No. 75, paras. 413-414)

⁵³⁵ We note that evidence produced by the United States supports the European Union's underlying assumption that the opportunity cost of capital depends on the use to which that capital is put, particularly on the risk associated with the project at issue. (See Brealey, Myers, and Allen, *Principles of Corporate Finance*, 9th Edition, p. 239 (Exhibit USA-99))

⁵³⁶ In making this observation, we make no judgment as to the propriety of using the WACC to discount expected revenue streams in other contexts.

⁵³⁷ The European Union asserts that the ALII also captures inflation and reflects project-specific risk. (European Union's response to Arbitrator question No. 27, para. 114; and No. 75, section A)

⁵³⁸ See e.g. European Union's written submission, para. 396; and response to Arbitrator question No. 17, para. 85.

of the compliance panel's reference period (i.e. 2015), as "has been firmly established by the {DS316 arbitrator}"⁵³⁹.

6.263. The European Union proposes to perform this forward adjustment by applying an inflation factor to the order-date lost-sales values, i.e. the ALII. According to the European Union, the ALII compiles Airbus' standard contractual escalation rates, and as such performs the forward adjustment from Airbus' perspective by reflecting industry participants' best assessment of cost dynamics in the LCA industry over time, as they affect Airbus.⁵⁴⁰ The European Union argues that use of the ALII is supported by the approach taken by the DS316 arbitrator because, in performing an equivalent inflation adjustment, that arbitrator relied on the [[***]] contractual escalation formulae contained in relevant Boeing contracts as the best way to capture the price evolution of Boeing aircraft.⁵⁴¹ Accordingly, in bringing the order-date values forward to 2015, the European Union divides the average of the 2015 monthly values of the ALII by the ALII of the month in which each lost sale occurred in 2013 or 2014 and multiplies the lost sales values by that ratio.⁵⁴²

6.264. The United States does not contest the European Union's adjustment of order-date values forward to 2015 in a way that reflects Airbus' perspective for the ultimate purpose of determining a maximum level of Annual Suspension.⁵⁴³ The United States rejects, however, the European Union's proposal to do so using the ALII. According to the United States, a generic measure of inflation such as the producer price index (PPI) for civilian aircraft (CA) manufacturing "makes more sense" than a negotiated and customer-specific measure.⁵⁴⁴ In the United States' view, this is so because the purpose of the inflation adjustment is merely to restate a valuation of adverse effects as an equivalent real value in a future year, and thus it would be more logical to use a single inflation rate for the entire value of adverse effects, as opposed to different [[***]] contractual escalation factors that may vary under each lost sale.⁵⁴⁵ The United States nonetheless acknowledges that, if the Arbitrator opted to follow the DS316 arbitrator's reliance on contractual escalation rates, then "use of the ALII would be appropriate".⁵⁴⁶

6.265. The Arbitrator notes that the parties agree that the Arbitrator should, in order to obtain an aggregate annualized value of the lost sales, restate the order-date values of the Icelandair 2013, Air Canada 2013, and Fly Dubai 2014 lost sales on a common monetary basis using an index that reflects the perspective of Airbus. We agree that this proposed adjustment is a logical step in arriving at an aggregate annualized value of the lost sales from which a maximum level of Annual Suspension will be determined.⁵⁴⁷ The parties further agree that an appropriate common monetary basis in which to express the values of the lost sales is 2015 US dollars. We discern no reason to question this approach, 2015 being the most recent year in the reference period. We further note that this approach is consistent with how the DS316 arbitrator calculated an aggregate annualized value of

⁵³⁹ European Union's written submission, para. 396.

⁵⁴⁰ European Union's methodology paper, paras. 102-103; and response to Arbitrator question No. 16, para. 72.

⁵⁴¹ European Union's written submission, para. 396. The European Union observes that the DS316 arbitrator said that it chose "[***] escalation factor ratio" because such "escalation factor reflects [[***]] changes in labour and material costs resulting from inflation and other economic changes". (European Union's response to Arbitrator question No. 16, para. 74 (citing Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.497) (emphasis omitted))

⁵⁴² European Union's written submission, para. 396.

⁵⁴³ United States' written submission, para. 172; and response to Arbitrator question No. 16, para. 69. While the United States initially proposed to express the value of each lost sale on a common basis of 2014 US dollars, "2014 {being} the year in which the latest lost sale occurred", the United States subsequently revised its position to convert all order-date values into 2015 US dollar values. (See e.g. Annualized Value of the Adverse Effects in 2015 Dollars (Revised) (Exhibit USA-105 (HSBI)))

⁵⁴⁴ United States' written submission, para. 123 (citing Producer Price Indexes – Program Overview, U.S. Department of Labor, Bureau of Labor Statistics (Exhibit USA-11)). See also PPI Industry Data File for Aircraft Manufacturing – Civilian Aircraft, Not Seasonally Adjusted (Jan. 1986 – March 2019), U.S. Department of Labor, Bureau of Labor Statistics (Exhibit USA-12).

⁵⁴⁵ United States' written submission, paras. 123-125; and response to Arbitrator question No. 16, para. 70. The United States explains that using [[***]] contractual escalation factors may result in (the portion of the countermeasures that reflects) the adverse effects quantified with respect to one lost sale being inflated from one year to the next more than the equivalent measure for another lost sale. (United States' written submission, para. 125)

⁵⁴⁶ United States' response to Arbitrator question No. 16, para. 71.

⁵⁴⁷ See section 6.4.2 above.

adverse effects using a multi-year reference period (i.e. adjusting, from Boeing's vantage point, all values of adverse effects into US dollar values in the final year of the reference period).⁵⁴⁸

6.266. The only disagreement between the parties to resolve in this context is what index to use to convert the order-date lost-sales US dollar values into 2015 US dollar values. The European Union proposes the ALII, whereas the United States advocates using the PPI for CA manufacturing.

6.267. We recall that the United States' objection to using the ALII rests on its view that, because the adjustment at issue is only intended to maintain the real value of adverse effects over time, a single and generic measure of inflation should be used to inflate all lost sales instead of different [[***]] contractual escalation factors susceptible to change between each sale.⁵⁴⁹ We do not see a justification in the United States' suggestion that using the ALII might result in variations in the inflation rates applied to each lost sale, thereby yielding a different inflation effect on the different portions of the adverse effects. We recall that the ALII is an inflation index that reflects Airbus' standard price escalation formulae (in a non-[[***]] manner) and, hence, fixes a single escalation factor for each month of each year between the base date and December 2019. It follows that all lost sales are inflated based on the same inflation index, not potentially different [[***]] indices as the United States suggests. To that extent, because the ALII conforms with the United States' acknowledgement that using a single measure of inflation would be appropriate to adjust the real value of adverse effects associated with all three lost sales, we are unconvinced by the reason advanced by the United States for using the PPI for CA instead of the ALII.

6.268. We further note that the DS316 arbitrator also rejected the United States' arguments for using the PPI for CA manufacturing for purposes of the same restatement of values. Noting that the United States had proffered "mostly practical justifications"⁵⁵⁰ for using the PPI for CA manufacturing, the DS316 arbitrator considered that, insofar as inflation in this context relates to "values concerning Boeing aircraft", "price evolution" would be "best captured by the [[***]] escalation formula", which contains a "[[***]] escalation factor ratio" reflecting "[[***]] changes in labour and material costs resulting from inflation and other economic changes".⁵⁵¹ Essentially the same logic supports using the ALII as an inflation index in this proceeding. As with the "[[***]] escalation factor ratio" used in the DS316 arbitration, the ALII is specific to the relevant LCA manufacturer's viewpoint and accounts for [[***]] changes in labour and material costs resulting from inflation and other economic changes. Indeed, the ALII is more specific to Airbus' perspective than the PPI for CA manufacturing, as it more precisely tracks the evolution of prices from Airbus' perspective (which the parties agree is the perspective that an appropriate inflation index should reflect).

6.269. In the light of the above, we consider that the European Union's method of using the ALII to restate the order-date values of the lost sales on a common 2015-dollar basis is reasonable. Thus, for the Icelandair 2013, Air Canada 2013, and Fly Dubai 2014 lost sales, and as proposed by the European Union, we will multiply the values of the lost sales (expressed in order-date US dollar terms) by the 2015-to-2013 and 2015-2014 ratios of the relevant ALII figures respectively in order to express all such values on the same 2015 US dollar monetary basis, and then sum those individual values to determine one aggregate value for the lost sales.

⁵⁴⁸ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, paras. 6.493-6.495.

⁵⁴⁹ United States' written submission, paras. 123-125; and response to Arbitrator question No. 16, para. 70.

⁵⁵⁰ The DS316 arbitrator considered, but was not persuaded by, the arguments advanced by the United States for using the PPI for CA manufacturing, including that the PPI for CA manufacturing is a reasonable proxy for the increased dollar value of LCA over time; that it is a publicly available and regularly updated index, published by a government institution; that it is unlikely to be subject to manipulation by industry participants; and that it is also not specific to airlines. (See Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, paras. 6.496-6.497)

⁵⁵¹ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, paras. 6.496-6.497. (fn omitted) We note that the bracketed text in this quotation was treated as BCI in the DS316 arbitration decision, and that the European Union re-submitted the information as BCI in this proceeding. (European Union's response to Arbitrator question No. 16, para. 74)

6.4.7.3 Annualization period

6.270. In their most recent valuations of the adverse effects, both parties propose to annualize the aggregated value of the lost sales over the length of the reference period. We consider this an appropriate methodology. As discussed in section 6.4.5.1 above, the choice of an appropriate period of annualization should be made with reference to a period over which the economic harm being measured occurs. In this dispute, the compliance panel identified the occurrence of the relevant lost sales (i.e. the economic events that we value in this context) in the post-implementation period over a particular temporal period, i.e. the reference period. We further recall that the DS316 arbitrator instructively explained at some length why it makes both legal and economic sense to temporally assign the value of LCA lost sales to the time-period over which they were identified (in that case, and in our case, the reference period used in the respective compliance proceedings).⁵⁵² We therefore see no reason to question the parties' proposal that annualizing the value of the lost sales over the length of the reference period will result in a maximum level of Annual Suspension that is commensurate with the degree and nature of the adverse effects determined to exist.

6.4.8 Technical issues regarding the valuation of threat of impedance

6.271. In this part of the Decision, we address technical aspects of the European Union's methodology that are specific to the valuation of adverse effects in the form of threat of impedance. These relate to: (a) how to temporally adjust counterfactual delivery prices back to the reference period; and (b) the appropriate temporal period(s) over which to annualize the aggregate values of threat of impedance in the two geographic markets. We address each in turn.

6.4.8.1 Temporal adjustment of delivery-date values

6.272. In its valuation methodology with respect to threat of impedance using a "delivery-centric" approach⁵⁵³, the European Union discounts the value of the counterfactual delivery prices of scheduled LCA deliveries to determine their value at the beginning of the reference period (which, according to the European Union, is January 2013). It then aggregates these January 2013 values to determine the value of threat of impedance in January 2013 dollar terms. The European Union uses Airbus' cost of debt (in the form of the 2013 Euro-denominated 10-year Airbus bond yield rate) as the discount factor to perform this discounting exercise.⁵⁵⁴

6.273. The United States also performs a discounting exercise in the valuation methodology that it proposes with respect to threat of impedance using a delivery-centric approach. The United States argues that in the compliance proceedings the threat of impedance was found to exist during the reference period based on deliveries of LCA that were scheduled to be delivered in the future. Therefore, according to the United States, the objective of the discounting exercise is to determine the expected value of these future LCA deliveries during the reference period. For this purpose, the United States discounts the value of the counterfactual delivery prices of scheduled LCA deliveries to determine their expected value to Airbus in 2015 (i.e. the last year of the reference period) and subsequently aggregates these 2015 values to determine the aggregated value of threat of impedance in 2015 dollar terms. The United States maintains that, as was proposed in the case of lost sales, the appropriate discount rate to determine the expected value of future deliveries to Airbus is Airbus' WACC.⁵⁵⁵

6.274. The Arbitrator recalls that, in valuing threat of impedance, we value Airbus' post-reference period counterfactual deliveries resulting from the 2008 Fly Dubai and the 2011 Delta Airlines sales

⁵⁵² Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, section 6.3.3.2.1. In particular, the DS316 arbitrator noted that the "lost sales" occurred during the reference period used in the compliance proceedings, and further that "the value of a 'lost sale', when evidenced by an agreement constituting an order for subsequent delivery of the purchased goods and assessed at the time of that agreement, would be the expected value of the goods that would have been traded if the supplier that lost the sale had won the sale". (Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.98)

⁵⁵³ We recall that the European Union refers to the approach it adopts in this regard as a "threat of impedance" approach rather than a "delivery-centric" approach for reasons discussed in fn 254 above.

⁵⁵⁴ European Union's response to Arbitrator question No. 66, paras. 269-270; and comments on the United States' response to Arbitrator question No. 66, para. 290.

⁵⁵⁵ United States' response to Arbitrator question No. 66, paras. 92-94; and comments on the European Union's response to Arbitrator question No. 66, para. 129.

campaigns. Both parties agree, as do we, that such delivery-date values should be temporally adjusted back to the reference period. This adjustment allows us to put such values on a common US dollar basis (both parties ultimately express the values on a 2015 US dollar basis) in order to allow us to calculate an annualized aggregated value of the threat of impedance. The annualized aggregated value of the threat of impedance, expressed on a 2015 US dollar basis, can then be summed with the annualized aggregated value of lost sales to obtain a maximum value of Annual Suspension.

6.275. We therefore note that each party proposes to perform this temporal adjustment by *discounting* the delivery-date prices back to the reference period (albeit to different dates in the reference period). As discussed in section 6.4.7.1 above, discounting is necessary in the context of lost sales in order to capture Airbus' risk and cost of waiting to receive the payment between the time of order and the time of delivery. In other words, and more generally, the need to discount arises where the cash streams to be realized from, for instance, the conclusion of an LCA sales contract are temporally removed from the conclusion of that contract.

6.276. In the light of the above observation, in valuing threat of impedance, we consider it inappropriate to adjust the delivery-date values back to the reference period by discounting (i.e. by using an instrument that captures Airbus' risks and costs of waiting). As explained in detail in section 6.4.5.3, the adverse effect finding that we value here, i.e. the threat of impedance, did not refer to an event that caused economic harm to the European Union in the reference period. Rather, the *threat* component of the adverse effect directs us to a *future* period (i.e. the post-reference period). It is in this future period that the economic harm (i.e. impedance evidenced by deliveries of Boeing LCA) was expected to occur.⁵⁵⁶ Consistent with the finding of threat of impedance, therefore, we value deliveries at the times that Airbus' relevant counterfactual deliveries would have occurred in the post-reference period. As Airbus receives the full outstanding payment upon delivery, no relevant cash stream associated with a delivery occurs in the future relative to the delivery. Hence, there is no reason to account for the risk and cost to Airbus of waiting to receive any such cash stream. Both Airbus' cost of debt and Airbus' WACC, in our view, are instruments that capture such risk and cost.⁵⁵⁷ Thus, we consider that both are inappropriate tools with which to perform the temporal adjustment of these delivery prices back to the reference period since using them would be inconsistent with the nature of the threat findings that we are valuing.

6.277. In selecting an appropriate tool with which to perform this temporal adjustment, we recall that, in the context of valuing threat of impedance, the purpose of the temporal adjustment of relevant delivery-date prices back to the reference period is to allow us to place their values on a common monetary basis with respect to each other and with respect to the value of lost sales so that all these values can be summed. This aggregation of values on a common monetary basis will allow us to determine a maximum level of Annual Suspension. We therefore recall that we already have selected the ALII as the appropriate tool with which to convert 2013 and 2014 lost sales values into 2015 US dollar values in section 6.4.7.2 above. The purpose of that temporal adjustment is the same as the purpose of the temporal adjustment under examination here, i.e. to place US dollar values at different dates on a common US dollar basis from the perspective of Airbus. For the same reasons discussed in that section, therefore, we consider it appropriate to use the ALII in this context to temporally adjust delivery prices to the reference period as well.

6.278. For the foregoing reasons, and in the context of valuing threat of impedance, we will temporally adjust the relevant counterfactual delivery-date prices from the times the deliveries would have occurred back to the reference period using the ALII. Using the ALII is consistent with the nature of the threat findings that we value in this context. We select the year 2015 as the year to which to adjust such prices. Indeed, both parties, in their most recent methodologies, ultimately express the value of threat of impedance in 2015 US dollar values, and we further note that 2015 is the year to which we will adjust the values of lost sales in order to aggregate them. Adjusting delivery prices to 2015 is thus appropriate. Accordingly, we divide the average of the 2015 monthly

⁵⁵⁶ This stands in contrast to valuing lost sales, as the lost sales that occurred during the reference period were the economic events that we value as having caused economic harm to the European Union (i.e. the time at which Airbus lost the relevant sales).

⁵⁵⁷ See section 6.4.7.1 above.

values of the ALII by the ALII of the month to which we assign each counterfactual delivery and multiply the threat of impedance value by that ratio.⁵⁵⁸

6.4.8.2 Annualization period(s)

6.279. Above, we concluded that, in our valuation of threat of impedance, we will only value counterfactual deliveries resulting from the 2011 Delta Airlines lost sale and 2008 Fly Dubai lost sale that would have occurred *after* the end of the reference period. That being the case, the parties disagree as to the annualization period of those values, i.e. the number of months by which we will divide the value of such deliveries before multiplying them by 12 to arrive at an annualized value of the threat of impedance.

6.280. The European Union argues that we should use the reference period as the annualization period for any valuation of the threat of impedance, including in the event that we take a "delivery-centric" approach.⁵⁵⁹ This position appears generally grounded in the European Union's underlying position that the threat of impedance that existed in the reference period comprised all future deliveries that were undelivered at any point in the reference period, and therefore, the appropriate annualization period for this threat of impedance would be the reference period.⁵⁶⁰ The European Union makes three more specific arguments in support of this position.⁵⁶¹ First, it argues that annualization should reflect the average annual value of the adverse effects, and because "the correct numerator is the value of the threat of impedance that arose during the {36-month} reference period", the denominator in the annualization calculation should be the same time-period.⁵⁶² Second, it argues that the DS316 arbitrator used as its reference period for valuing the adverse effects the 25-month reference period used by the compliance panel in that dispute and annualized the adverse effects over the same 25-month period, and that even-handedness demands that this Arbitrator follow the same approach.⁵⁶³ Finally, the European Union argues that the United States has failed to demonstrate that the European Union's approach is inconsistent with Articles 7.9 and 7.10 of the SCM Agreement.⁵⁶⁴

6.281. The United States argues that we should use the length of the time-period over which the relevant post-reference period deliveries would have occurred in the counterfactual as the annualization period. The United States submits that the essence of annualization is achieving a correspondence between the numerator (i.e. number of deliveries giving rise to threat of impedance in the US and UAE markets) and the denominator (i.e. the period over which those deliveries were scheduled to occur).⁵⁶⁵ Accordingly, the United States takes as the denominator the time over which the counterfactual Airbus deliveries under the 2011 Delta Airlines and 2008 Fly Dubai sales would have been scheduled to occur *after* the end of the compliance panel's reference period.⁵⁶⁶

⁵⁵⁸ To facilitate the technical calculations and to account for uncertainty regarding the specific delivery months of the counterfactual deliveries, after determining the number of counterfactual deliveries that would have occurred in a given calendar year, we assume that all counterfactual deliveries would have occurred in July of that year, as proposed by both parties in their calculations. We also note that the arbitrator in DS316 did the same in this context. (Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, fn 675)

⁵⁵⁹ European Union's response to Arbitrator question No. 66, paras. 236 and 239.

⁵⁶⁰ See para. 6.95 and, more generally, section 6.4.5.3.2 above.

⁵⁶¹ European Union's response to Arbitrator question No. 66, paras. 236 and 239.

⁵⁶² European Union's response to Arbitrator question No. 66, paras. 240-243 and 301.

⁵⁶³ European Union's response to Arbitrator question No. 66, paras. 244-248.

⁵⁶⁴ European Union's response to Arbitrator question No. 66, paras. 248-250.

⁵⁶⁵ United States' comments on the European Union's response to Arbitrator question No. 66, para. 115. See also United States' response to Arbitrator question No. 35, para. 110 (indicating that annualizing the value of relevant deliveries by the number of years over which such deliveries were scheduled to occur is proper when deliveries occur over "multiple years").

⁵⁶⁶ Assuming the end of the reference period to be September 2015, the United States notes that counterfactual Airbus deliveries would have occurred in the [[***]] as well as [[***]]. Accordingly, the United States argues that the 2015 expected value of the post-reference period deliveries under both sales campaigns would be divided by [[***]] to arrive at an annualized value of the threat of impedance findings. (United States' response to Arbitrator question No. 66, para. 96) Alternatively, if the compliance panel reference period were 2013-2015, the United States submits that the value of scheduled deliveries on or after 1 January 2016 would be divided by [[***]] because the numerator would reflect deliveries made over [[***]]. (See United States' comments on the European Union's response to Arbitrator question No. 66, para. 115)

6.282. The Arbitrator notes that the annualization periods that the parties propose are of different durations.⁵⁶⁷ We therefore begin by examining whether using the reference period as the annualization period, as proposed by the European Union, would be consistent with our mandate. At the outset, we emphasize in this context what the reference period is and what it is not. The reference period is a time-period in the post-implementation period in which the compliance panel identified adverse effects and, more specifically, forms of serious prejudice. We discern nothing about that exercise that indicates that the period was also intended to be a period of time to which relevant economic value flowing from such adverse effects was necessarily to be assigned for the purpose of determining a maximum level of Annual Suspension under Article 7.10 of the SCM Agreement. Such assignment and determinations were not the task of the compliance panel. Thus, there is no basis on which to conclude that our task of fashioning a "commensurate" level of countermeasures, insofar as annualization is concerned, is *ipso facto* controlled by the duration of the reference period in all cases.

6.283. We therefore recall our earlier conclusion that our mandate and the purpose of countermeasures compels the conclusion that the choice of an appropriate period of annualization should be made with reference to a period over which the economic harm being measured occurs. We therefore observe that the compliance panel's findings with respect to threat of impedance and the nature of threat of impedance, indicate that we should value the threatened impedance with reference to counterfactual LCA deliveries occurring after the reference period and at the times those deliveries would have occurred.⁵⁶⁸ Thus, the economic harm flowing from the threat of impedance is measured by the value of the relevant counterfactual LCA deliveries at the times they would have been delivered. For threat of impedance, therefore, we consider that an appropriate annualization period should be made with reference to a period over which the relevant counterfactual deliveries being valued occurred. In light of this conclusion, we see no way to consider the reference period alone as being that period since no relevant counterfactual deliveries would have occurred during the reference period.⁵⁶⁹ We therefore cannot accept the reference period as an appropriate annualization period.⁵⁷⁰

6.284. We note that this conclusion is consistent with how the DS316 arbitrator valued present impedance, i.e. by valuing the relevant counterfactual deliveries in a time-period in which deliveries would have occurred (in that proceeding, in the compliance panel's reference period).⁵⁷¹ Our approach to annualization, therefore, gives consistency to how *present* and *threatened* (i.e. future) impedance are valued, while making due allowance for the different time-periods in which they may materialize and result in economic harm to the complainant in the form of deliveries.

6.285. We further note that the European Union observes that the DS316 arbitrator annualized the adverse effects in that proceeding over the compliance panel's reference period and refers in particular to the DS316 arbitrator's statement that "we see no need to ensure that our 'chosen period of reference', i.e. the 2011-2013 reference period, 'may lead to a reasonable estimation' of any present and future adverse effects". The European Union argues that this statement effectively dispenses with any requirement of consistency between the time periods in the numerator and the

⁵⁶⁷ The reference period's duration is 36 months. The number of months over which the counterfactual deliveries would have occurred in the post-reference period in the US and UAE markets is HSBI, as it is derived from the HSBI proposed delivery schedules in the Airbus final offers in the 2011 Delta Airlines and 2008 Fly Dubai sales campaigns.

⁵⁶⁸ See para. 6.144 above.

⁵⁶⁹ This stands in contrast to a situation involving lost sales, whereby we temporally assign the value of the resulting deliveries to the time of the lost sale that occurred during the reference period. As described in detail in the DS316 arbitration, it makes legal sense to do this because the "lost sale" itself is the adverse effect that occurred during the reference period, but it also makes economic sense to do so because "an LCA order contract is reasonably characterized as having an expected economic value such that when the order is lost, the supplier who would have won the sale in the relevant counterfactual (in this case, Boeing) can be said to have lost that expected value at the time of the lost sale". (Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.104) In the case of threat of impedance, the "threat" element temporally directs us to *after* the reference period to identify the economic event, i.e. "impedance" taking the form of LCA deliveries.

⁵⁷⁰ We note that we are not dealing with an instance where present impedance was found to exist during the reference period and then was expected to continue after the reference period by virtue of an *additional* threat finding. We make no judgments as to the appropriate annualization period in such a situation.

⁵⁷¹ In doing so, the Arbitrator noted that "other arbitrators likewise established maximum levels of suspension based on the relevant effects of the measures in question over one year". (Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.495)

denominator in an annualization exercise.⁵⁷² We disagree with the European Union's argument. The DS316 arbitrator's referenced statement was made in the context of resolving a different issue, namely whether an arbitrator's valuation of "adverse effects determined to exist" identified in a past time-period, expressed as a maximum level of Annual Suspension, must reflect the value of adverse effects caused by the subsidies that were *not* previously identified by the compliance panel (specifically, adverse effects that the relevant subsidies may cause at the time of the arbitration proceeding, and into the then-future).⁵⁷³ We agree with the DS316 arbitrator's conclusion in this context, i.e. that it is not necessary for the valuation to do so under such circumstances.

6.286. In keeping with that conclusion, we fashion a maximum level of Annual Suspension solely with reference to the adverse effects determined to exist in the compliance panel's reference period, and not with reference to what adverse effects the Washington State B&O tax rate reduction may cause now or in the future.⁵⁷⁴ Finally, although we decide this issue with reference to what is permissible under our mandate, we also note that we have concerns as to the systemic implications of the European Union's proposed approach in this context. This is so because the European Union's approach to temporal assignment of economic value of threatened serious prejudice, and resulting annualization, reserves a significant role for the duration of a reference period. We thus observe that, under the European Union's approach, in two disputes where all other things are equal, significantly different levels of countermeasures could be authorized simply by virtue of different reference periods having been used (both temporally disconnected from the economic harm being valued) to identify the same threatened serious prejudice. We have doubts that such a result could be considered legally or economically sound⁵⁷⁵ and are concerned about the potential of such an approach to yield arbitrary and/or punitive levels of countermeasures.⁵⁷⁶

6.287. With these observations in mind, we turn to determining what the appropriate annualization period is for the finding of threat of impedance in the two relevant geographic markets, i.e. the United States and the UAE.

a. Annualization period for the United States market

6.288. With respect to the annualization period for the threat of impedance in the US geographic market, the United States proposes that we use the time-period beginning at the end of the reference period and through the end of the last calendar year in which Airbus' counterfactual deliveries stemming from the 2011 Delta Airlines campaign would have occurred (which is a [[***]]).⁵⁷⁷ The European Union has proposed no alternative annualization period (other than the reference period, which we have already rejected as an appropriate annualization period immediately

⁵⁷² European Union's response to Arbitrator question No. 74, para. 381 (referring to Decision by the Arbitrator, *EC – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.74).

⁵⁷³ Indeed, after the DS316 arbitrator determined that it could fashion a maximum level of Annual Suspension based on the adverse effects identified in the compliance panel's reference period, the arbitrator still engaged in a multi-page discussion about whether it would be legally and economically appropriate to temporally assign the value of lost sales to that reference period. (Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, pp. 51-56) It is difficult to discern why such a lengthy discussion would have been necessary if the arbitrator had previously determined that all values of the adverse effects should *ipso facto* be assigned to that reference period.

⁵⁷⁴ See Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, Annex C-1 (explaining this issue further).

⁵⁷⁵ We also note that, under the European Union's approach, in instances where threat of serious prejudice is identified but the time-period over which it would materialize is not previously specified, the level of countermeasures could further be significantly altered by arbitrators choosing to value the same rate of harm over different durations following the same reference period. Annualizing such harm with reference to the time-period over which it occurs may mitigate such potential variations.

⁵⁷⁶ It is generally recognized that WTO remedies are not intended to be "punitive". (Decisions by the Arbitrator, *US – Washing Machines (Article 22.6 – US)*, para. 1.17 (citing Decisions by the Arbitrator, *US – Upland Cotton (Article 22.6 – US I)*, para. 4.109); *US – 1916 Act (EC) (Article 22.6 – US)*, para. 5.8; and *US – FSC (Article 22.6 – US)*, para. 5.62 (noting that even though in prohibited subsidies disputes Article 4.10 of the SCM Agreement authorizes "appropriate" countermeasures that are not "disproportionate", there is nothing in that Article or its context "which suggests an entitlement to manifestly punitive {countermeasures}"). See also Decision by the Arbitrator, *Brazil – Aircraft (Article 22.6 – Brazil)*, para. 3.55 (explaining that "{a} countermeasure becomes punitive when it is not only intended to ensure that the {WTO Member} in breach of its obligations bring its conduct into conformity with its international obligations, but contains an additional dimension meant to sanction the action of that {WTO Member}").

⁵⁷⁷ United States' response to Arbitrator question No. 66, para. 96; and comments to European Union's response to Arbitrator question No. 66, para. 130.

above). The Arbitrator considers that, under the particular circumstances of this proceeding, the United States' proposed approach to annualization with respect to the US geographic market is acceptable under our mandate. That approach purportedly uses the temporal period that corresponds to the period over which the relevant deliveries would have occurred in the counterfactual in the post-reference period.⁵⁷⁸ We further recall that the finding of threat of impedance in the United States market was based on expected post-reference period deliveries stemming from the 2011 Delta Airlines sales campaign, specifically. Further, the Airbus proposed delivery schedule envisioned a temporal spread of deliveries that is [[***]] over the delivery period. We note, however, that we use an annualization period in this context that is [[***]] than the United States' proffered time-period. This is so because the Airbus delivery schedule does not actually envision deliveries occurring for the [[***]] of the United States' proffered annualization period. We thus use an annualization period that corresponds to the number of months over which the Airbus proposed delivery schedule envisioned deliveries to occur, which is still a [[***]] period.

b. Annualization period for the UAE market

6.289. With respect to the annualization period for the threat of impedance in the UAE geographic market, the United States proposes that we use the entire time-period in the post-reference period over which Airbus' counterfactual deliveries stemming from the 2011 Delta Airlines and 2008 Fly Dubai sales campaigns would have occurred. The end of this proposed period is apparently based on the year of the last counterfactual Airbus delivery associated with the 2011 Delta Airlines sales campaign, which is [[***]] the date of the last counterfactual Airbus delivery in the 2008 Fly Dubai sales campaign. The United States has offered no other justification for this annualization period. We therefore recall that the threat of impedance findings from the compliance proceedings were expressed as separate findings for the US and UAE geographic markets, based on specific and different lost sales. We thus see no reason stemming from the compliance panel's findings to annualize them with reference to the same time-period. We therefore consider that, in the circumstances of this proceeding, the United States has failed to properly justify its proposed annualization period as acceptable under our mandate, and we accordingly decline to use it.

6.290. We observe that neither party offers a method for annualizing the value of the threat of impedance in the UAE market with reference to anything other than the temporal periods that we have already rejected. We therefore must select an annualization period in this context that is consistent with our task of determining a maximum level of Annual Suspension that is "commensurate with" the value of the adverse effects determined to exist. In selecting an annualization period, we first establish what we consider to be relevant factual assumptions. In particular, we note that the counterfactual Airbus deliveries [[***]] based on Airbus schedules. In other words, the relevant deliveries would have occurred over a time-period of [[***]]. Moreover, we note that the presentation of the counterfactual Airbus deliveries in the Fly Dubai final 2008 offer does not enable us to determine precisely [[***]].⁵⁷⁹ We note, however, that the United States, in its most recently updated calculations concerning a "delivery-centric" approach to valuing threat of impedance, assumes an HSBI number of Airbus counterfactual deliveries postdating the reference period by apparently assuming an even temporal spread of deliveries over the maximum number of relevant months over which deliveries could have occurred under the Airbus proposed delivery schedule. In the light of the previously noted uncertainties surrounding the exact timing of Airbus' counterfactual post-reference period deliveries, we consider this methodology reasonable and accordingly adopt it. We therefore assume the same HSBI number of post-reference period deliveries over the same number of months as the United States appears to do in its most recent calculations.

6.291. With such reasonable assumptions established, we turn to selecting an appropriate annualization period. We have, as set out above, selected an annualization period for threat of impedance in the US market that corresponds to the number of months in the post-reference period over which the relevant counterfactual deliveries would have been made. In the light of the facts and circumstances of this proceeding, and in the absence of any alternative suggestions from the parties, we consider it appropriate to adopt the same method here, i.e. selecting an annualization

⁵⁷⁸ We also note that the resulting annualized number of deliveries in the post-reference period generally corresponds to the average annual number of deliveries envisioned under the entire Airbus delivery schedule.

⁵⁷⁹ We note that Boeing had delivered all of its aircraft under the 2008 Fly Dubai sales campaign by the end of the third quarter of 2015. (See 2 RPQ Ascend Database Update (Exhibit EU-75); and European Union's response to Arbitrator question No. 66 paras. 204, 226, 322, 326, and 330. See also [[***]].

period that corresponds to the number of months over which Airbus' post-reference period counterfactual deliveries that we value would have occurred, which is an HSBI number of months. This implies that we divide the total value of all post-reference period deliveries by the number of months between the end of the reference period and the last counterfactual delivery and multiply this value by 12 to obtain an annualized value.

6.292. We note that this HSBI number of months is [[***]]. Under the specific circumstances of this proceeding, however, we still consider this an appropriate annualization period. Both parties have proffered ways to annualize the adverse effects in this proceeding over time periods that have not always coincided with a whole number of years. Also, this method accords with the United States' general position that the relevant counterfactual deliveries should be annualized over the time during which they would have occurred. Further, we note that the resulting number of annual deliveries reached under this method generally corresponds to the average number of annual deliveries envisioned under the Airbus proposed delivery schedule for the 2008 Fly Dubai sales campaign as a whole, and to the average number of annual post-reference period deliveries in the UAE market had we included 2014 Fly Dubai deliveries in the threat of impedance calculation. Finally, and relatedly, we note that the period over which relevant deliveries would have occurred in the UAE market would have been greater than [[***]] had we valued the deliveries resulting from the 2014 Fly Dubai lost sale as threat of impedance, rather than valuing the 2014 Fly Dubai sales campaign as a lost sale (as was proposed by both parties).

a. Conclusion

6.293. For the foregoing reasons, in the context of valuing the threat of impedance, and in the light of the specific circumstances of this proceeding, we will annualize the value of relevant post-reference period counterfactual Airbus deliveries in the US and UAE markets with reference to the number of months over which such counterfactual deliveries would have occurred in each market.

6.4.9 Summary of technical valuations of the adverse effects determined to exist

6.294. In the sections above, we have made various decisions regarding the methodology that we consider appropriate to determine a maximum level of Annual Suspension. In the light of such decisions, this section summarizes how we will determine that maximum value. In accordance with our findings made thus far, we follow a three-step approach whereby we calculate: (a) an aggregate annualized value for significant lost sales expressed in 2015 US dollars; (b) an aggregate annualized value for threat of impedance expressed in 2015 US dollars; and (c) an aggregate value given by the sum of these two values. We address each in turn in the following subsections.

6.4.9.1 Valuation of significant lost sales

6.295. As noted, in the preceding sections, we have adopted aspects of the methodology proposed by the European Union regarding the valuation of significant lost sales while making adjustments to other aspects. This section summarizes those decisions and describes how we will determine an aggregate annualized value of adverse effects in the form of significant lost sales.

6.296. As explained in section 6.4.5.2 the findings of significant lost sales relate to three separate sales campaigns that occurred during the reference period, i.e. Icelandair 2013, Air Canada 2013, and Fly Dubai 2014. The value of adverse effects in the form of significant lost sales is equal to the sum of the values of the Airbus LCA that would have been ordered and delivered had Airbus won the campaigns in the counterfactual. To calculate the value of each sales campaign, we follow an order-centric approach, i.e. we determine the total value of each sales campaign at the time the orders were lost before adjusting those values to a common 2015 US dollar basis.

6.297. We found it reasonable to assume that, in the counterfactual, Airbus would have won all three sales campaigns and would have received orders for as many LCA as Boeing actually received in connection with each sales campaign (not including options, whether exercised or not).⁵⁸⁰ We rely on Airbus' final offers in the respective sales campaigns to obtain counterfactual delivery models, delivery schedules, and Net Fly-Away Prices. In sales campaigns in which differences between Airbus' final offers and Boeing's purchase agreements require additional assumptions regarding (a) certain

⁵⁸⁰ See sections 6.4.6.1 and 6.4.6.2 above.

counterfactual delivery dates and (b) LCA models that would have been ordered, we resolve the former issue with the aid of the delivery schedules in Boeing's purchase agreements and the latter issue in the light of the models that were offered by Airbus in its relevant final offers (see section 6.4.6.3).

6.298. The value of each sales campaign is equal to the sum of the discounted value of Airbus' Net Fly-Away Prices (including [[***]], and as escalated to the time of delivery) for each counterfactual delivery associated with that given sales campaign. For each delivery we account for the risk of cancellation and discount the delivery-date price back to the time of order as follows:

$$\begin{aligned} \text{AdjustedLostSale}_{\text{sales campaign } i}^{\text{in order date } o \text{ USD}} &= \sum_{\text{delivery date } d \text{ LCA model } m} \sum_{\text{LCA model } m} \text{AirbusNetFlyAwayPrice}_{\text{sales campaign } i, \text{LCA model } m, \text{delivery date } d}^{\text{in delivery date } d \text{ USD}} \\ &\times \text{NumberOfDeliveredAircraft}_{\text{sales campaign } i, \text{LCA model } m, \text{delivery date } d} \\ &\times \text{SurvivalRate}_{\text{delivery date } d} \times \frac{1}{(1 + \text{DiscountFactor}_{\text{order date } o})^{\text{delivery date } d - \text{order date } o}}, \end{aligned} \quad (2)$$

where

$$\text{SurvivalRate}_{\text{delivery date } d} = \begin{cases} 1 & \text{if delivery date } d < \text{Jan 2020} \\ (1 - \text{AverageAirbusSingleAisleCancellationRate}_{2003-2007})^{d - \text{Jul 2019}} & \text{else'} \end{cases}$$

and $\text{AirbusNetFlyAwayPrice}_{\text{sales campaign } i, \text{LCA model } m, \text{delivery date } d}^{\text{in delivery date } d \text{ USD}}$ is defined by Equation (1) in section 6.4.6.6 on counterfactual delivery prices.

6.299. We adjust counterfactual delivery numbers to reflect cancellations that would have occurred before 2020 in the counterfactual, as described in section 6.4.6.4. This affects only one delivery from the Fly Dubai 2014 campaign as summarized in Table 1. We assume that all other counterfactual Airbus deliveries scheduled to occur before 2020 would have occurred.

Table 1: Counterfactually ordered and delivered aircraft

Lost sale	Order year	Number of counterfactually ordered aircraft ⁵⁸¹	Number of counterfactually delivered aircraft
Icelandair	2013	16	16
Air Canada	2013	61	61
Fly Dubai	2014	86	85

6.300. We adjust the counterfactual delivery prices of all orders that would have been delivered in 2020 or later and are unaffected by a pre-2020 cancellation by a survival rate to reflect the risk that such deliveries might be cancelled in the counterfactual future. The survival rate gives the probability that a counterfactual delivery will not be cancelled in the counterfactual. We construct a survival rate for all counterfactual deliveries scheduled from 2020 onwards based on Airbus' average historic cancellation rate between 2003 and 2007 for single-aisle LCA (section 6.4.6.4).

6.301. Once we have thus obtained the delivery prices of the relevant counterfactual LCA, we discount those delivery prices back to the time that the relevant sales campaign was lost. The discount factor accounts for the fact that monetary flows associated with orders resulting from sales campaigns are temporally removed from the time at which such orders are placed. It addresses resulting risks and harmonizes the monetary basis of delivery values at the date of order. As

⁵⁸¹ See section 6.4.6.3 above for a detailed explanation regarding the determination of the number of counterfactual orders. It will be recalled that, to obtain these numbers, we predicated our analysis on the proposed number of orders in the Airbus final offers, which are HSBI. That analysis ultimately concluded, however, that we should use the number of orders that coincided with the number of firm orders in the Boeing purchase agreements, which the numbers in this column represent.

discussed in section 6.4.7.1, we use Airbus' average cost of debt in the order year as the appropriate discount factor.⁵⁸²

6.302. Having obtained the adjusted values of the lost sales expressed in order-date US dollars, we proceed by bringing them to a common monetary basis in order to be able to sum the values of the three lost sales. Both parties agree to use the year 2015 as the common monetary basis. We use the yearly average of the 2015 monthly ALII for this purpose as outlined in section 6.4.7.2 and calculate the sum to generate a total aggregate value for the significant lost sales expressed in 2015 US dollar terms as follows:

$$AdjustedLostSales^{in\ 2015\ USD} = \sum_{sales\ campaign\ i} AdjustedLostSale_{sales\ campaign\ i}^{in\ order\ date\ o\ USD} \times \frac{ALII_{2015}}{ALII_{order\ date\ o}}. \quad (3)$$

6.303. In the light of the European Union's request to impose countermeasures on an annual basis, we annualize the value of significant lost sales expressed in 2015 USD. We annualize the aggregate lost sales value expressed in 2015 US dollars over the length of reference period, which was determined in section 6.4.7.3 to last 36 months from October 2012 to September 2015, as follows:

$$AnnualizedLostSales^{in\ 2015\ USD} = \sum_{sales\ campaign\ i} AdjustedLostSale_{sales\ campaign\ i, order\ date\ o}^{in\ 2015\ USD} \times \frac{12}{DurationOfReferencePeriod} \quad (4)$$

6.304. The resulting aggregate annualized value of the significant lost sales expressed in 2015 US dollars is USD [[***]].

6.4.9.2 Valuation of threat of impedance

6.305. As was the case for the valuation of significant lost sales, we have in the preceding sections adopted aspects of the methodology proposed by the European Union regarding the valuation of threat of impedance while making adjustments to other aspects. This section summarizes those decisions and describes how we will determine an aggregate annualized value of adverse effects in the form of threat of impedance.

6.306. The compliance panel found threat of impedance in two different geographic markets, i.e. the United States and the UAE. We value the threat of impedance in each such market separately but follow the same methodology for each. We then express the value of threat of impedance in each market on a common monetary basis, annualize those values, and sum the two so as to calculate a final aggregate annualized value for adverse effects in the form of threat of impedance. The common monetary basis is 2015 US dollars, corresponding to the last year of the reference period and to the monetary basis of the significant lost sales, so that we can subsequently calculate a maximum level of Annual Suspension by summing the aggregate annualized values of significant lost sales and threat of impedance.

⁵⁸² As mentioned in footnote 558 above, as proposed by both parties in their calculations, to facilitate the calculations and to account for the uncertainty regarding the specific delivery months of the counterfactual deliveries, we assume that all counterfactual deliveries would have occurred in July of a given year. We note that the arbitrator in DS316 did the same in this context. (Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, fn 675) Regarding the dates of the relevant sales campaigns, i.e. the date on which Airbus would have secured the orders in the counterfactual, the European Union uses the exact month in which Boeing actually won the relevant sales campaigns, whereas the United States assumes in its calculations that all sales campaigns would have taken place in July of the relevant year. We discern nothing unreasonable in the European Union's approach, and accordingly adopt it. We note that while the DS316 arbitrator assumed that all orders associated with lost sales would have occurred in July in the relevant year, that was the methodology proposed by the United States in that proceeding, with respect to which the arbitrator noted no objection by the European Union. (Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, fns 350 and 675) We further note that, although this Decision is circulated after July 2020, the parties' last substantive submissions were received in March 2020.

6.307. We value threat of impedance using a delivery-centric approach.⁵⁸³ That is, and as explained in sections 6.4.5.3.2 and 6.4.5.3.3, we value the counterfactual deliveries that Airbus would have made had Airbus not suffered impedance in the two geographic markets in the post-reference period. These counterfactual deliveries would have resulted from Airbus winning one sales campaign in each relevant geographic market, i.e. the 2011 Delta Airlines sales campaign for the US market and the 2008 Fly Dubai sales campaign for the UAE market.

6.308. To determine delivery prices of the relevant deliveries, we proceed with the same steps as when valuing deliveries stemming from lost sales. Thereafter, as described in section 6.4.8.1, we temporally adjust the delivery prices directly back to 2015 using the ALII. The aggregate 2015 US dollar value of the threat of impedance in each geographic market is thus given by:

$$\begin{aligned} & \text{AdjustedThreatOfImpedance}_{\text{geographic market } g}^{\text{in 2015 USD}} \\ &= \sum_{\text{delivery date } d} \sum_{\text{LCA model } m} \text{AirbusNetFlyAwayPrice}_{\text{sales campaign } i, \text{LCA model } m, \text{delivery date } d}^{\text{in delivery date } d \text{ USD}} \\ & \times \text{NumberOfDeliveredAircraft}_{\text{sales campaign } i, \text{LCA model } m, \text{delivery date } d} \\ & \times \text{SurvivalRate}_{\text{delivery date } d} \times \frac{\text{ALII}_{2015}}{\text{ALII}_{\text{delivery date } d}}. \end{aligned} \quad (5)$$

6.309. As described in section 6.4.8.2, we annualize the aggregate 2015 US dollar value of the threat of impedance in both geographic markets over the time during which, in the post-reference period, the relevant deliveries would have occurred. We then sum those two aggregate annualized values in order to obtain one aggregate annualized value for the two threat of impedance findings as follows:

$$\begin{aligned} & \text{AnnualizedThreatOfImpedance}_{\text{geographic market } g}^{\text{in 2015 USD}} \\ &= \sum_{\text{geographic market } g} \text{AdjustedThreatOfImpedance}_{\text{geographic market } g}^{\text{in 2015 USD}} \\ & \times \frac{12}{\text{DurationOfDeliveries}_{\text{sales campaign } i}}. \end{aligned} \quad (6)$$

The resulting annualized value of threat of impedance expressed in 2015 US dollars is USD [[***]].

6.4.9.3 Aggregated annualized value of significant lost sales and of the threat of impedance in the two geographic markets

6.310. We have in the previous two subsections calculated aggregate annualized values for adverse effects in the form of significant lost sales and threat of impedance. To obtain the maximum level of Annual Suspension, therefore, we sum these two values as follows⁵⁸⁴:

⁵⁸³ See para. 6.145 above.

⁵⁸⁴ We note the argument made several times in this proceeding by the United States (most recently in United States' response to Arbitrator question No. 66, paras. 98-105) that valuations for different findings regarding adverse effects (i.e. significant lost sales and the two findings of threat of impedance) cannot be simply summed to obtain an aggregate value when their annualization periods differ. The United States argues that since the findings of significant lost sales and threat of impedance are based on a "single economic phenomenon", their total value should in this case be a weighted average of "the two annual values" for lost sales and threat of impedance. We note that the United States predicates its argument here on the fact that different types of harm (lost sales and threat of impedance) arise from the same subsidy. (United States response to Arbitrator question No. 66, para. 101) We fail to see why this is relevant in this context. What we value is not the subsidy itself, but two distinct forms of harm arising from it, i.e. lost sales and threat of impedance. The deliveries that we value for each stem from different, i.e. not overlapping, LCA orders. We further do not see why the choice of annualization periods should affect these considerations. Annualization standardizes the length of the periods over which the different findings have been valued at one year. While annualization mathematically leads initially to differential denominators, we note that we reduce the fractions to the common denominator one before summing them. Given the common denominator and the re-stating of all values on a common monetary basis, we do not discern any reason why we cannot aggregate the values through summation. Accordingly, we reject the argument by the United States.

$$\text{Annualized AEDTE}^{\text{in 2015 USD}} = \text{Annualized Threat of Impedance}^{\text{in 2015 USD}} + \text{Annualized Lost Sales}^{\text{in 2015 USD}}. \quad (7)$$

6.311. The total annualized value of the adverse effects determined to exist, expressed in 2015 US dollar terms, amounts to USD 3,993,212,564. We will refer to this as the 2015 Annualized Value.

6.5 Countermeasures commensurate with the annualized value of the adverse effects determined to exist

6.312. In section 6.4.9.3 above, we determined that the 2015 Annualized Value is USD 3,993,212,564. It will be recalled that the European Union requested that we adjust the 2015 Annualized Value for inflation from 2015 up to April 2020 and thus express the level of Annual Suspension in 2020 US dollar terms (the 2020 Annualized Value). The European Union also requested that it be authorized to adjust the 2020 Annualized Value for inflation arising in future, post-2020, years in which the European Union would apply countermeasures.

6.313. It will further be recalled that, in accordance with Article 7.10 of the SCM Agreement, the maximum level of Annual Suspension must be "commensurate" with the annualized value of adverse effects determined to exist. We must therefore examine whether the level of countermeasures proposed by the European Union is "commensurate" with the 2015 Annualized Value of adverse effects that we calculated.

6.314. We address these two issues – the requested adjustment for inflation up to 2020 and beyond, and the "commensurate" 2015 Annualized Value – in the following sections.

6.5.1 Adjustment of the annualized value of adverse effects determined to exist for inflation to April 2020 dollars and for future years in which countermeasures are applied

6.315. The European Union proposed in its methodology paper to calculate a "present value" of adverse effects determined to exist by adjusting delivery-date prices (of all deliveries associated with significant lost sales and threat of impedance) for inflation up to April 2020, the month in which the European Union stated that it expected the Arbitrator to issue its Decision.⁵⁸⁵ The European Union proposed this adjustment "to prevent inflation from affecting the real value of countermeasures due", noting that the European Union will be authorized to impose countermeasures several years after the end of the implementation period.⁵⁸⁶ The European Union performed this adjustment based on relative changes in the value of the ALII, i.e. by multiplying delivery-date prices by a ratio of the ALII for April 2020 divided by the ALII for the month of the delivery at issue. That April 2020 US dollar value would then be divided by the number of months in the reference period and multiplied by 12 in order to yield the 2020 Annualized Value.⁵⁸⁷

6.316. The European Union also asserted that the 2020 Annualized Value of adverse effects was to be adjusted for inflation in all subsequent years in which countermeasures could be applied, assuming "the United States fails to demonstrate ... that it has achieved compliance".⁵⁸⁸ The European Union sought to implement this inflation adjustment by multiplying the 2020 Annualized Value by a ratio of the ALII in the year in which the countermeasures would be imposed, divided by the ALII for April 2020.⁵⁸⁹

6.317. The European Union later revised certain aspects of its methodology "in an effort to ensure consistency between the approaches taken in {the DS316 arbitration} and by the Arbitrat{or} ... in

⁵⁸⁵ European Union's methodology paper, paras. 8, 78, 97, 104, 138, and 158, and fn 146. In its methodology paper, the European Union first performed a temporal adjustment seeking to express adverse effects in April 2020 US dollars, before restating those adverse effects on an annualized basis. In its written submission, however, the European Union updated its calculation methodology in several respects, including by reversing the order in which it undertook the temporal adjustment and the annualization exercise. (See e.g. European Union's written submission, paras. 396-400)

⁵⁸⁶ European Union's methodology paper, para. 82.

⁵⁸⁷ European Union's methodology paper, paras. 97-103.

⁵⁸⁸ European Union's written submission, para. 408 and fn 578 thereto; and methodology paper, para. 78 and fns 143 and 146.

⁵⁸⁹ European Union's methodology paper, fn 146.

the present proceedings".⁵⁹⁰ Accordingly, and acknowledging that the DS316 arbitrator declined the United States' requests to adjust for inflation the annualized value of adverse effects to the then-present day and for future years, the European Union explained that it "no longer undertakes time-adjustments for inflation until April 2020" or "seeks to inflation-adjust the level of countermeasures going forward".⁵⁹¹

6.318. The United States, in its written submission, did not specifically object to the European Union's determination of the 2020 Annualized Value of adverse effects but challenged the European Union's use of the ALII to do so. The United States argued that, to the extent this inflation adjustment serves to state an equivalent real value in a future year, it should not be made using [***] but rather using a producer price index specific to civilian aircraft manufacturing.⁵⁹² The arguments raised by the United States in this context are the same as those we considered above in section 6.4.7.2 in relation to the restatement of adverse effects on a common 2015 US dollar basis. The United States did not appear to have specifically responded to the European Union's request to adjust for inflation the level of countermeasures for each year going forward.

6.319. The United States subsequently revised its position on the propriety of inflation adjustments up to April 2020 in light of the DS316 arbitrator's decision not to make such adjustments, and now suggests that the Arbitrator follow this guidance.⁵⁹³ The United States relies on the DS316 arbitrator's observation that adjusting for inflation to obtain a present value was neither necessary to preserve the effectiveness of the countermeasures that the United States sought authorization to impose, nor in keeping with the absence of such adjustments in virtually all prior arbitration decisions in which a similar structure of countermeasures has been adopted.⁵⁹⁴

6.320. The Arbitrator notes that, in making explicit that its revised valuation methodology no longer accounts for inflation up to the present day and going forward, the European Union has effectively abandoned its requests that the Arbitrator include those steps in determining the maximum level of Annual Suspension. We see no reason to decline the European Union's updated valuation approach in this regard. We consider this approach to be particularly reasonable in the circumstances of this proceeding in that it comports with the DS316 arbitrator's decision not to adjust for inflation the value of the maximum level of Annual Suspension to the then-present day and for each year going forward.⁵⁹⁵

6.321. Thus, we decide not to adjust the maximum level of Annual Suspension for inflation up to the present day (2020) and in future years in which countermeasures may be applied.⁵⁹⁶

6.5.2 The "commensurate" 2015 Annualized Value

6.322. We recall that we have calculated the 2015 Annualized Value (i.e. the maximum level of Annual Suspension), to be USD 3,993,212,564. The European Union calculates the 2015 Annualized

⁵⁹⁰ European Union's written submission, para. 394.

⁵⁹¹ European Union's response to Arbitrator question No. 85, para. 458. See also response to Arbitrator question No. 39, paras. 152-157; and No. 40, paras. 158-159.

⁵⁹² United States' written submission, paras. 112-126.

⁵⁹³ United States' response to Arbitrator question Nos. 38-39, paras. 120-121.

⁵⁹⁴ United States' response to Arbitrator question Nos. 38-39, para. 120 (referring to Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, paras. 6.512-6.513). The United States submits that the same considerations as to the propriety of inflation adjustments up to April 2020 apply with equal force in this proceeding. Thus, because no relevant factors distinguish this dispute and the DS316 arbitration on this issue, the United States asserts that the Arbitrator may take the same approach.

⁵⁹⁵ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, paras. 6.514 and 6.522. We note that the DS316 arbitrator, at least in part, based its decision in the light of prior arbitrator practice. (*Ibid.*, para. 6.512)

⁵⁹⁶ Additionally, we would question the European Union's argument that the ALII would be the appropriate inflation index to use. As noted above in section 6.1, the ALII is an index compiled by the European Union based on Airbus' contractual escalation rates representing [***] changes in labour and materials costs resulting from inflation and other economic changes. (European Union's methodology paper, para. 101) Thus, the ALII is specific to Airbus' viewpoint. Yet, and as the DS316 arbitrator observed, the value that would have needed to be protected from being eroded by inflation is the value of the countermeasures, which, here, may be imposed by the European Union on a potentially wide range of goods and/or services imported from the United States.

Value as USD 8,581,019,068.⁵⁹⁷ We thus examine whether the European Union's value of USD 8,581,019,068 may be considered "commensurate" with the 2015 Annualized Value of adverse effects that we calculated.

6.323. The phrase "commensurate with" within the meaning of Article 7.10 of the SCM Agreement connotes a correspondence of a "less precise degree of equivalence than exact numerical correspondence" between the "adverse effects determined to exist" and "countermeasures" proposed.⁵⁹⁸ The European Union, however, does not request that it be allowed to take countermeasures in the form of a maximum level of Annual Suspension higher than the annualized value of adverse effects (nor do we perceive any justification for doing so in the circumstances of this proceeding). We further note that our calculated 2015 Annualized Value of adverse effects (i.e. USD 3,993,212,564) is significantly lower than the European Union's proposed 2015 Annual Suspension Value (i.e. USD 8,581,019,068), a value that we have determined in this Decision was derived from an at-times flawed methodology. Even assuming that, as a general matter, the commensurateness standard could permit some limited degree of discrepancy between the proposed level of countermeasures and the value of the adverse effects determined to exist, an adjustment from USD 3,993,212,564 to USD 8,581,019,068 would in our view exceed, by far, any permissible degree of discrepancy. We are accordingly unable to accept USD 8,581,019,068 as the "commensurate" 2015 Annualized Value.⁵⁹⁹

6.324. We thus perceive neither a need nor a justification, in the particular circumstances of this proceeding, for establishing the 2015 Annual Suspension Value at a level that is higher than the 2015 Annualized Value of adverse effects that we have established. Accordingly, we determine that the "commensurate" 2015 Annualized Value, and thus the maximum level of Annual Suspension, is USD 3,993,212,564.

7 THE UNITED STATES' CLAIM CONCERNING THE PRINCIPLES AND PROCEDURES SET OUT IN ARTICLE 22.3 OF THE DSU (CROSS-RETALIATION)

7.1. It will be recalled that the European Union requests authorization to take countermeasures under the GATT 1994 and the SCM Agreement, as well as the GATS.⁶⁰⁰ In its request, the European Union states that it is neither practicable nor effective for the European Union to suspend concessions or other obligations only in the goods sector up to a value of approximately USD 12,000 million. The European Union's request also states that, given the degree and nature of the adverse effects and serious prejudice, the circumstances are "serious enough" within the meaning of Article 22.3(c) of the DSU.⁶⁰¹ The European Union thus requests authorization to impose countermeasures consisting of one or more of the following:

⁵⁹⁷ We note that over the course of the proceeding, the European Union presented several alternate methods of calculating the level of Annual Suspension which have given rise to different levels of Annual Suspension. (See fn 123 above). Most recently, and at the request of the Arbitrator, the European Union offered a methodology in which it uses an order-centric approach for calculating the value of significant lost sales and a delivery-centric approach (i.e. a "threat of impedance" approach) for calculating the value of threat of impedance (see section 6.4.5.3.3 above). Based on this approach, the European Union calculated the 2015 Annualized Value to be USD [***] (excluding the value of the 2004-2006 R&D Adverse Effects). (See 2RPQ valuation of single-aisle lost sales – Airbus delivery schedules (Exhibit EU-85 (HSBI)); and 2RPQ valuation of single-aisle threat of impedance – Airbus delivery schedules (Exhibit EU-77 (HSBI))) We therefore note that, in this subsection, even if we were to use the USD [***] value instead of the USD 8,581,019,068 value, our conclusion with respect to the "commensurate" 2015 Annualized Value would be the same.

⁵⁹⁸ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 5.4 (citing Decision by the Arbitrator, *US – Upland Cotton (Article 22.6 – US II)*, paras. 4.35-4.39). See also section 6.4.5.1 above.

⁵⁹⁹ See Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, paras. 6.505-6.509 (resolving the same issue similarly).

⁶⁰⁰ See para 1.20 above.

⁶⁰¹ Article 22.3(c) of the DSU provides that:

In considering what concessions or other obligations to suspend, the complaining party shall apply the following principles and procedures:

...

(c) if that party considers that it is not practicable or effective to suspend concessions or other obligations with respect to other sectors under the same agreement, and that the circumstances are serious enough, it may seek to suspend concessions or other obligations under another covered agreement.

- a. suspension of tariff concessions and other related obligations under the GATT 1994 on a list of US products to be established in due course;
- b. suspension of concessions and other obligations under the SCM Agreement; and
- c. under the GATS, suspension of horizontal or sectoral commitments contained in the consolidated EU Schedule of Specific Commitments, as supplemented to incorporate the individual Schedules of Specific Commitments of its Member States, with regard to all principal sectors identified in the Services Sectoral Classification List.⁶⁰²

7.2. In response, the United States claimed that the European Union did not follow the principles and procedures set forth in Article 22.3 in considering what countermeasures to take.⁶⁰³ The United States thus reserved the right to raise a claim before the Arbitrator that the European Union had not followed the principles and procedures set forth in Article 22.3. It is for the United States to make out a *prima facie* case that the European Union did not follow the principles and procedures in Article 22.3.⁶⁰⁴

7.3. The United States advanced no such claim under Article 22.3 in its written submission or oral statement. Since the United States did not pursue its claim before the Arbitrator, we cannot examine this issue further in the present Decision. We note that in WTO dispute settlement practice, a Member's measure is treated as WTO-consistent until it has been proven otherwise.⁶⁰⁵ Accordingly, we consider that a complaining party's request under Article 22.3(c) must be treated as DSU-consistent until proven otherwise.⁶⁰⁶ Consequently, it has not been demonstrated that the European Union's request for cross-retaliation is inconsistent with Article 22.3(c) of the DSU.

8 CONCLUSION

8.1. For the reasons set out above, the Arbitrator concludes as follows:

- a. with reference to Articles 7.10 of the SCM Agreement and 22.6 of the DSU, the level of countermeasures "commensurate with the degree and nature of the adverse effects determined to exist" amounts to USD 3,993,212,564 per annum; and
- b. with reference to Article 22.3 of the DSU, the United States has not demonstrated that the European Union failed to follow the principles and procedures set forth in Article 22.3 of the DSU in determining that it is not practicable or effective to suspend concessions or other obligations in trade in goods and that the circumstances are serious enough.

8.2. The European Union may therefore request authorization from the DSB to take countermeasures with respect to the United States at a level not exceeding, in total, USD 3,993,212,564 annually. These countermeasures may take the forms enumerated in points (1)-(3) in the penultimate paragraph of document WT/DS353/17, which are also referenced in paragraph 7.1 a.-c. above.

⁶⁰² Recourse to Article 22.2 of the DSU, and Articles 4.10 and 7.9 of the SCM Agreement by the European Union, WT/DS353/17.

⁶⁰³ Recourse to Article 22.6 of the DSU by the United States, WT/DS353/19.

⁶⁰⁴ Decisions by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 7.3; *US – Upland Cotton (Article 22.6 – US II)*, para. 5.55; *US – Gambling (Article 22.6 – US)*, para. 2.27; and *EC – Bananas III (Ecuador) (Article 22.6 – EC)*, para. 59.

⁶⁰⁵ Appellate Body Report, *US – Carbon Steel*, para. 157.

⁶⁰⁶ Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 7.5.