

U.S. BUSINESS CONFIDENTIAL INFORMATION (BCI) AND
HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED

*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*

(DS316)

**RESPONSES OF THE UNITED STATES
TO THE QUESTIONS FROM THE ARBITRATOR**

November 30, 2018

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<i>Brazil – Aircraft (22.6)</i>	Decision by the Arbitrator, <i>Brazil – Export Financing Programme for Aircraft – Recourse to Arbitration by Brazil under Article 22.6 of the DSU and Article 4.11 of the SCM Agreement</i> , WT/DS46/ARB, 28 August 2000
<i>EC – Bananas III (Ecuador) (22.6)</i>	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
<i>EC – Bananas III (22.6 – US)</i>	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
<i>EC – Hormones (22.6 – Canada)</i>	Decision by the Arbitrator, <i>European Communities – Measures Concerning Meat and Meat Products (Hormones), Original Complaint by Canada – Recourse to Arbitration by the European Communities under Article 22.6 of the DSU</i> , WT/DS48/ARB, 12 July 1999
<i>EC – Hormones (22.6 – US)</i>	Decision by the Arbitrator, <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
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<i>US – Upland Cotton (22.6 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
<i>US – Upland Cotton (22.6 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
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For the European Union

- 1. How many final orders did Airbus receive for A380 aircraft and A350XWB aircraft: (i) before 1 December 2011; and (ii) after 31 December 2013 but before November 2018? How many A380 aircraft and A350XWB aircraft did Airbus deliver: (i) before 1 December 2011; and (ii) after 31 December 2013 but before November 2018?**

For both parties

- 2. With reference to footnote 221 and Table 1 of the European Union's written submission, and Exhibit EU-54, could the parties please explain from what data source the Ascend Database obtains its information regarding dates of LCA actual orders, actual deliveries, and, in particular, estimated delivery dates?**
 - a. Does the Ascend Database information in Exhibit EU-54 contain: (i) the actual delivery dates for Airbus LCA that were the subject of the lost sales found by the compliance panel and the Appellate Body, insofar as such LCA have in fact been delivered; (ii) the estimated delivery dates for the Airbus LCA that were the subject of the lost sales found by the compliance panel and the Appellate Body but that have not yet been delivered; and (iii) the same information regarding the LCA that are the subject of the Boeing "comparator orders" as the European Union uses that phrase in its written submission?**

1. As an initial matter, the United States notes that the database previously referred to as Ascend in the first compliance proceeding (and as Airclaims in the original proceeding) is now the FlightGlobal Flight Fleets Analyzer database, though the United States will generally refer to this database as "Ascend" for the sake of convenience. Generally speaking, the parties have treated the Ascend and Airclaims databases as reliable sources for large civil aircraft ("LCA") order, delivery, and market share data in the original and first compliance disputes. This is not to say that Ascend data are completely accurate, but discrepancies tend to be minor between Ascend data and the actual Boeing and Airbus delivery and firm order data, which both companies report publicly.

2. The situation is somewhat different with respect to projected (or "estimated") delivery data, which are often not publicly available. Ascend data on projected deliveries can differ significantly from an LCA producer's delivery schedules at a given point in time. Moreover, Ascend projected delivery data appear to be continuously updated, such that it does not appear possible in 2018 to obtain Ascend data on projected deliveries from the time that orders were placed in the 2012 – 2013 period. In sum, the Ascend order and delivery data in Exhibit EU-54 are generally reliable, the projected delivery data in Exhibit EU-54 are somewhat less reliable (as a measure of projected deliveries as of 2018), and Exhibit EU-54 does not provide any reliable data concerning the projected deliveries for Airbus LCA ordered in the lost sales at issue, as of the times those orders were placed.

3. With regard to item (a)(i) of this question, the EU, in consultation with Airbus, is in the best position to comment on the accuracy of the Ascend delivery data compared to Airbus's own records of deliveries pursuant to the lost sales.

4. With regard to item (a)(ii), the Ascend data on projected deliveries as of 2018 are not the correct data under the U.S. methodology for quantifying the instances of lost sales, which is focused on the value of those sales according to the basis upon which they were determined to be

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“lost” and “significant” in the compliance proceeding. Boeing made its best effort to estimate the relevant Airbus delivery schedules as of the time of the orders in 2012 and 2013. If the EU seeks to have the calculation instead use the actual delivery schedules Airbus originally negotiated with these customers, and it has access to such data, it bears the burden of submitting that evidence for consideration by the Arbitrator

5. With regard to item (a)(iii), the United States is providing for each of the Cathay Pacific, Singapore Airlines, United, and Transaero “comparator” orders of Boeing LCA an exhibit containing Boeing’s “contracted delivery schedules” (*i.e.*, the schedule of deliveries agreed to at the time of order) and actual deliveries.¹ Comparing this Boeing data in Exhibit USA-29(HSBI) to the Ascend data in Exhibit EU-54 reveals the following discrepancies:

- For [[HSBI]].
- For [[HSBI]].
- For [[HSBI]].
- For [[HSBI]].

b. Insofar as the Ascend Database contains the information described in subparagraph (a), to what extent do the parties consider that data reliable, particularly with respect to estimated delivery dates? Does the information therein ever depart from the information submitted by the parties in support of their arguments? If so, please address why different information was submitted.

6. As discussed above in response to subpart (a) of this question, the Ascend data on actual deliveries is generally reliable, but not perfect. With respect to the Ascend data on projected (or estimated) delivery dates as of 2018, this data is based on a different temporal perspective compared to the delivery dates as of the time of order in 2012 – 2013 that Boeing estimated for Airbus aircraft ordered in the lost sales transactions, and which were submitted in the U.S. Methodology Paper. However, in case it might be helpful to the Arbitrator, the United States provides below a table comparing the Ascend projected delivery data for the Airbus orders at issue to the Boeing estimated delivery dates used in the U.S. calculations:

¹ See Boeing Contracted Delivery Schedules and Actual Delivery Information for “Comparator” Orders (Exhibit USA-29(HSBI)).

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Customer	Order Year	Model	Data Source	Projected Delivery Years											Total	
				2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026		
Cathay Pacific	2012	A350-1000	Ascend 2018	-	-	-	2	-	8	-	-	-	-	-	10	
			Boeing Estimate	-	-	3	3	4	-	-	-	-	-	-	10	
Transaero	2012	A380	Ascend 2018	N/A											-	
			Boeing Estimate	2	2	-	-	-	-	-	-	-	-	-	-	4
Singapore Airlines	2013	A350-900	Ascend 2018	1	-	2	-	3	14	10	-	-	-	-	30	
			Boeing Estimate	-	-	-	10	10	10	-	-	-	-	-	30	
United Airlines	2013	A350-1000	Ascend 2018	-	-	-	-	-	-	-	-	-	-	10	10	
			Boeing Estimate	-	-	2	4	4	-	-	-	-	-	-	10	
Emirates	2013	A380	Ascend 2018	6	8	5	4	6	6	6	6	6	3	-	-	50
			Boeing Estimate	3	9	6	6	6	6	6	6	6	2	0	0	50

c. Are there other databases similar to the Ascend Database containing the data described in subparagraph (a)? If so, what are they and from what data sources do they obtain their information?

7. The United States is not aware of a database other than Ascend/FlightGlobal that contains the precise information referenced in subparagraph (a) or, more generally, the kinds of detailed order, delivery, and projected delivery data for both Boeing and Airbus that is available from Ascend/FlightGlobal.

1.1 QUESTIONS RELATED TO THE COUNTERFACTUALS

For the European Union

3. With reference to paragraph 200, first bullet point, of the European Union's written submission, could the European Union please respond to the following questions:

- a. Does the European Union consider a "counterfactual involving withdrawal of {LA/MSF} subsidies" to be: (i) the counterfactual that the Appellate Body used in the compliance proceedings; or (ii) a new counterfactual different from the counterfactual used by the Appellate Body in the compliance proceedings?
- b. Insofar as the answer is (i) in subparagraph (a), could the European Union please clarify what were the relevant Appellate Body findings regarding "withdrawal" upon which the counterfactual was based?

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- c. Insofar as the answer is (ii) in subparagraph (a), could the European Union please explain why the Arbitrator should use any new counterfactual in the light of the fact that Articles 7.9–7.10 of the SCM Agreement refer to "the adverse effects determined to exist", i.e. the adverse effects that the Appellate Body already identified using a counterfactual that did not appear to be based on withdrawal?**
- d. In light of the European Union's answers to subparagraphs (a)–(c) above, could it please clarify upon what counterfactual the European Union relies elsewhere in its written submission and in particular in section IX.A.2?**
- 4. With reference to paragraphs 82, 144, 165–171, and 176 of the United States' written submission, could the European Union please respond to the United States' assertions regarding the unavailability of the A380 aircraft and A350XWB aircraft in the marketplace?**
- 5. With reference to paragraphs 173, 177, and 186 of the United States' written submission, could the European Union please comment on whether the Arbitrator should consider demand for LCA to be "inelastic"?**
- 6. With reference to paragraphs 191–196 and section V.B.2.a.ii of the United States' written submission regarding whether Boeing lacked the capacity to deliver certain LCA, could the European Union please respond to the arguments contained therein?**

For both parties

- 7. With reference to paragraph 208 and sections IX.B.1.b and IX.B.2.a.ii of the European Union's written submission, and paragraph 231 and section V.B.2.a.ii of the United States' written submission, could the parties please answer the following questions:**

 - a. In the counterfactual under which the Appellate Body made its most recent findings in this dispute – i.e. a world absent of A380 LA/MSF and A350XWB LA/MSF – should the Arbitrator's focus be on *Boeing's* production capacity or the production capacity of the *US LCA industry*? What company/companies would comprise the *US LCA industry* in the Appellate Body's counterfactual?**

8. The *Agreement on Subsidies and Countervailing Measures* (“SCM Agreement”) addresses adverse effects to the interests of a Member, not any particular private company, and the ultimate findings adopted by the DSB therefore also are stated in terms of the U.S. LCA industry.² Thus, legally, the appropriate counterfactual relates to the entire U.S. LCA industry, rather than a single company.³ In the real world, where the EU did subsidize every major Airbus LCA family to date, Boeing is the only remaining LCA manufacturer in the U.S. industry.

9. While the Appellate Body did not foreclose the possibility that, absent A380 and A350 XWB LA/MSF, there would have been another U.S. industry participant, the findings of

² See Compliance Appellate Report, paras. 6.31(a), 6.37(a), 6.42(a).

³ See *EC – Bananas III (22.6 – US)*, para. 6.27.

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continuing adverse effects are focused on the impact the subsidies had on Boeing, which is understandable since Boeing was the only extant U.S. LCA producer during the period reviewed. Of course, even if Boeing would remain the only U.S. LCA manufacturer, the counterfactual Boeing would likely have been a stronger competitor, with greater sales and market share, where its only competitor, Airbus, was deprived of the massive subsidized financing that enabled the launch and development of its two most recent and technologically-advanced aircraft.

10. Similarly if, as the Appellate Body found, Boeing would have won sales that Airbus won instead – and delivered aircraft to markets Airbus served – there would have been no impediment (and every incentive) for Boeing to increase its production capacity to meet demand for its aircraft. In other words, Boeing’s current production capacity clearly reflects rational decision-making in the context of the actual world – where Airbus through subsidies captured a significant portion of the market demand.

11. In any event, no consideration of counterfactual production capacity is necessary. The EU raises this issue as a non-attribution factor; that is, the EU suggests that production capacity restraints, rather than the subsidies, is the cause of some Boeing lost sales or impeded deliveries. But this is not the appropriate forum to re-litigate non-attribution factors. If Boeing – or, conceptually, the U.S. LCA industry – were restrained from making sales or delivering aircraft by capacity constraints, this would have informed the compliance proceeding’s analysis. To the extent the EU’s arguments could somehow demonstrate that valid non-attribution factors, rather than the effects of LA/MSF subsidies, caused the relevant lost sales, such arguments would have been highly relevant to whether the U.S. industry did actually lose sales or market share in the December 2011 – 2013 period as a result of the subsidies.

12. However, the EU never established that production capacity constraints would have prevented the U.S. LCA industry from taking orders or delivering aircraft in the counterfactual situation. Indeed, as explained in response to Question 46, the EU argued in the compliance proceeding that production delays, not the subsidies, caused the Boeing 747-8 lost sales. This alleged non-attribution factor is, in essence, a temporary capacity constraint. For example, if a manufacturer experiences a two-year delay in its ability to manufacture and deliver a product to the customer, then for those two years, its production capacity is capped at zero. The EU’s argument was that Boeing lost sales because it was not able to produce the aircraft and deliver it to the customer, not because of the subsidies. The compliance panel rejected the EU’s argument, finding that the causal link – based on the absence of the A380 from the market – was not severed by the EU’s alleged non-attribution factor.⁴ The EU’s argument was then rejected again on appeal.⁵

⁴ See Compliance Panel Report, para. 6.1816.

⁵ See Compliance Appellate Report, para. 5.735.

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13. Consequently, the DSB adopted significant lost sales and impedance findings with no reservations about or mentions of counterfactual production capacity or timing. The EU's production capacity constraint arguments represent a collateral attack on those findings, and have no place in this arbitration.

- b. Is a counterfactual whereby, in the absence of A380 LA/MSF and A350XWB LA/MSF, "the LCA industry would have been characterized by the existence of either a Boeing monopoly, or a duopoly involving Boeing and another US LCA producer" plausible?⁶**

14. These counterfactual scenarios are plausible but not established. In the compliance panel's analysis, these were the *only* two plausible scenarios. Other scenarios, by contrast, were considered implausible. But these were based on the absence of pre-A380 LA/MSF, as well as LA/MSF for the A380 and the A350 XWB. The Appellate Body found that the EU no longer had compliance obligations with respect to pre-A380 LA/MSF. Therefore, there is no longer a basis to consider as established that these two scenarios are the *only* plausible scenarios.

15. However, the United States does not need to establish that Airbus would not exist. The DSB found that the A380 and A350 XWB would not be available for order or delivery in the post-implementation period, and made adverse effects findings, including impedance in the VLA product market, as a result. The Arbitrator's role is to determine whether the U.S. proposed countermeasures are commensurate with the adverse effects determined to exist, not to assess again causation.

1.2 QUESTIONS RELATING TO THE ECONOMIC METHODOLOGIES PROPOSED BY THE PARTIES

1.2.1 Generally

For the European Union

- 8. With reference to section VII of the European Union's written submission, could the European Union please clarify the meaning of the phrase "total amount"? Should the Arbitrator interpret it not as an absolute maximum amount of countermeasures authorized, as the phrase was apparently used in *Canada – Aircraft*⁷, but, rather, as a set amount of countermeasures up to which the United States would be authorized to implement annually?**
- 9. With reference to paragraphs 122, 125–126, 129, and 334 of the European Union's written submission, is it the European Union's position that recurring countermeasures for an "indefinite period and total amount" can only be granted in cases where the "total amount" is determined using a past reference period that is "representative" of**

⁶ See Appellate Body Report, *EC and certain member States – Large Civil Aircraft (Article 21.5 – US)*, para. 5.591 and fn 1636.

⁷ Decision of the Arbitrator, *Canada – Aircraft Credits and Guarantees (Article 22.6 – Canada)*, para. 4.1.

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relevant market trends that will occur annually for an indefinite period of time into the future?

- 10. With respect to paragraphs 101–103 of the United States' written submission concerning the arbitration decision in US – Upland Cotton (Article 22.6 II), could the European Union please respond to the arguments contained therein?**
- 11. With reference to paragraphs 83, 86, and 116 of the United States' written submission, could the European Union please respond to the United States' argument that the relevant findings by the compliance panel and the Appellate Body, because they are phrased "in the present tense", support the conclusion that the relevant "types" of adverse effects in this proceeding are presently ongoing?**
- 12. With reference to paragraphs 119–120 and 139 of the United States' written submission, could the European Union please respond to the United States' argument that the compliance panel, in paragraph 6.1112 of its report, rejected the European Union's characterization of what "the adverse effects determined to exist" are in this proceeding?**
- 13. With reference to paragraphs 129–130 of the United States' written submission regarding the risk of double-counting, could the European Union please respond to the arguments contained therein?**
- 14. With reference to paragraph 99 of the European Union's written submission, could the European Union please clarify whether the phrase "temporally-limited nature of the specific adverse effects determined to exist" refers to a notion that: (i) the orders representing the "lost sales" and the deliveries with respect to impedance found by the compliance panel and Appellate Body are discrete events that end with a delivery of the relevant LCA; and/or (ii) the ability of the subsidies at issue to cause lost sales and impedance was somehow time-bound?**
 - a. Insofar as the answer is (i), is the use of a temporally-bound reference period in which a compliance panel applies a counterfactual to identify the presence of relevant adverse effects always, through the use of a temporally-bound reference period, going to identify "temporally-limited" adverse effects"?**
 - b. Insofar as the answer is (ii), could the European Union please clarify whether this answer differs from the European Union's argument that the Arbitrator must consider the "non-recurring" nature of the subsidies at issue that have a "limited life"?**
- 15. With reference to, *inter alia*, paragraphs 29, 56, 76, and 132–133 of the European Union's written submission, could the European Union please elaborate on what exactly the "cause-and-effect pathway" is, and to which subsidies, specifically, it pertains?**
- 16. With reference to paragraphs 365–373 of the European Union's written submission, could the European Union please elaborate by providing a detailed list of each of the steps that the Arbitrator should follow to calculate the amount of countermeasures in such a way as to respect the four principles referred to in paragraph 365?**

For the United States

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17. With reference to paragraph 119 of the United States' written submission, where the United States provides a quotation from the compliance panel report which refers to the "same types" of adverse effects, could the United States please indicate what, specifically, were those "types" and to what they were the "same"? Did the compliance panel use the word "type" in that quotation in the same way that the United States uses it in paragraphs 86, 146, and 148 of its written submission?

16. In paragraph 6.1112 of its report, which includes the quotation in paragraph 119 of the U.S. written submission, the “types” of adverse effects refer to the forms of serious prejudice specified in Article 6.3 of the SCM Agreement that are “the effect of” the LA/MSF subsidies by virtue of the subsidies’ causal pathway (*i.e.*, product effects). “Same” characterizes the relationship between the types of adverse effects alleged in the compliance period and those in the original proceeding. The compliance panel used “type” in the same way the United States used it in paragraph 86 of its written submission. Indeed, the compliance panel in paragraph 6.1112 was highlighting the exact same EU error that the United States identified in paragraph 86.

17. In the original proceeding, LA/MSF subsidies were determined to cause product effects; they enabled Airbus products to compete when, absent the subsidies, they would not be available for order or delivery. As a result of these product effects, the LA/MSF subsidies were found to cause the U.S. LCA industry to lose sales and market share. In the first compliance proceeding, the EU attempted to treat its obligation to take appropriate steps to remove the adverse effects as limited to the specific instances of adverse effects identified in the original proceeding. Specifically, the EU contended that it achieved compliance by Airbus delivering the aircraft associated with lost sales found in the original proceeding.⁸

18. In rejecting this characterization, the compliance panel in paragraph 6.1112 emphasized that the United States was not attempting to prove a failure to remove specific past instances of adverse effects. Rather, the United States was alleging – and ultimately established – that “the challenged subsidies *continue to cause* the same types of ‘adverse effects’ today.”⁹ That is – through product effects – LA/MSF subsidies continue to cause various forms of serious prejudice.¹⁰ Thus, by “same types of adverse effects,” the compliance panel referred to various forms of serious prejudice that LA/MSF subsidies continue to cause through its product effects.

19. In its written submission in this arbitration, the EU repeated the error it made before the compliance panel. It treated as the “types of adverse effects determined exist” the five specific transactions identified as lost sales and the specific country markets in specific years that were

⁸ Compliance Panel Report, paras. 6.33-6.35.

⁹ Compliance Panel Report, para. 6.1112 (emphasis original).

¹⁰ See Compliance Panel Report, para. 820 (“In particular, Article 5 contemplates that a Member may be found to be in violation of its obligations, whenever it is demonstrated that a subsidy granted or maintained in the past causes or threatens to cause certain types of economic harm to the interests of another Member.”).

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the basis for impedance findings in the compliance proceeding. The United States in paragraph 86 of its written submission contrasted the EU’s erroneous attempt to limit the compliance findings to the actual past transactions during the reference period, with the findings in the compliance panel and appellate reports that LA/MSF subsidies continue to cause the same types of adverse effects as in the original proceeding.

20. The EU sought to find support for its view in the *US – Upland Cotton (22.6 II)* arbitrator’s use of the phrase “types of adverse effects” in the following passage:

In this respect, both parties suggest that the “nature” of the adverse effects may be understood in the context of the various types of adverse effects that may arise under Articles 5 and 6 of the *SCM Agreement*. Brazil notes that the “nature” of the adverse effects determined to exist will vary from case to case, and could involve a range of types of effects, depending on the specific subparagraph of Article 5 or 6 at issue. The United States also observes that “the nature of the adverse effects can be understood on the basis of the findings in the particular dispute”.

We agree that the reference to the “nature” of the adverse effects may be understood to refer to the different “types” of adverse effects that are foreseen in Articles 5 and 6, and that this therefore 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. These effects could manifest themselves in a variety of ways, each reflecting a specific type of trade distortion.¹¹

21. This passage is entirely consistent with the points made by the compliance panel and the United States in focusing the analysis on the “types” of adverse effects caused by the subsidies, and not on specific transactions or historic market share changes. The arbitrator’s reasoning offers no support for the already-rejected EU view that the extent of the adverse effects is limited to the specific instances that occurred during the reference period covered by the adopted findings.

22. In paragraph 146, the United States was simply clarifying that the relevant EU argument it was rebutting, and therefore the U.S. rebuttal, was with regard to significant lost sales (as opposed to, for example, impedance). Thus, when the United States asserted, “{t}he type of ‘adverse effects determined to exist’ relevant to this discussion is significant ‘lost sales’ within the meaning of Article 6.3(c),” it just as easily could have stated, “the form of adverse effects determined to exist...,” or simply, “this discussion of the adverse effects determined to exist relates specifically to significant lost sales.” In using the word “type,” which is not a term in the

¹¹ *US – Upland Cotton (22.6 II)*, paras. 4.42-4.43 (internal citations omitted).

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SCM Agreement, the United States did not intend to draw on any other use of this word, including the passage in paragraph 6.1112 of the compliance panel report.

23. Again, in paragraph 148, the United States did not use the word “type” as a term of art or with reference to the use of the word elsewhere or by the compliance panel. The United States could just have easily written, “Article 6.3 identifies specific forms of serious prejudice that are forms of adverse effects....”

18. With reference to, *inter alia*, paragraph 86 of the United States' written submission, could the United States please explain, if the "adverse effects determined to exist" are "types" of adverse effects listed in Article 6.3 of the SCM Agreement, whether the Arbitrator could, in order to determine "the adverse effects determined to exist", use a different reference period in which it examined if impedance occurred in geographic markets different from those listed in paragraph 6.42(a) of the Appellate Body report in the compliance proceeding?

24. Given the instruction to evaluate the degree and nature of the adverse effects determined to exist, the best approach would be for an arbitrator to estimate the level of the effects based on the findings adopted by the DSB and underlying evidence. Use of these established sources would also facilitate an arbitrator expediting its work in light of the timeframe under DSU Article 22.6, and result in countermeasures that are “commensurate” as required by SCM Agreement Article 7.9.

25. DSU Article 22.6 and Article 7.10 of the SCM Agreement do not preclude an arbitrator considering a different reference period or different country markets to examine impedance. However, an arbitrator would need to be extremely cautious in taking such an approach, which would inevitably take extra time. Moreover, the arbitrator would need to take care to avoid consideration of any collateral attacks on the adverse effects determined to exist, including, for example, arguments about the subsidies’ causal pathway. In this dispute, doing so would introduce unnecessary speculation; the U.S. approach properly values the actual instances of adverse effects determined in the post-implementation period during the compliance proceeding, which serve as the basis for the ultimate findings and the U.S. right to seek to impose countermeasures.

26. The DSB determined that LA/MSF for the A380 and A350 XWB causes adverse effects in the form of significant lost sales and impedance. It did so on the basis of factual evidence that established instances of both phenomena during the December 2011 – 2013 period. As explained elsewhere, the most reasonable and reliable approach to valuing the adverse effects determined to exist is to value the specific instances of adverse effects identified in the compliance proceeding. This is the approach put forward by the United States, and the EU has not demonstrated – nor can it – that this approach results in countermeasures not commensurate with the adverse effects determined to exist, which is the EU’s burden in seeking to invalidate the U.S. approach.

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27. Finally, the United States notes that an arbitrator is not at liberty to adopt approaches that serve as a collateral attack on the “adverse effects determined to exist.” Its role is to estimate “the degree and nature of the adverse effects determined to exist,” and not to modify or negate the findings regarding the causal pathway that are an essential underpinning of the “adverse effects determined to exist.” Therefore, even if a future reference period were used, there would be no opportunity to, for example, re-evaluate the findings that LA/MSF for the A380 and A350 XWB had “product effects” that resulted in lost sales and impedance.

19. With reference to paragraph 126 of the United States’ written submission, where the United States argues that the specific lost sales and impedance found in the compliance proceeding should be used to value ongoing countermeasures because “{t}he specific transactions ... remain the most objective, least speculative way to measure the extent of the adverse effects that the WTO-inconsistent subsidies cause on an annual basis”¹², could the United States please answer the following questions:

a. In what geographic markets does the United States assume that such adverse effects are occurring "on an annual basis" going forward?

28. The United States notes that the parties agree that each of the product markets in which LCA compete is global in geographic scope. The findings adopted by the DSB establish that the existing LA/MSF subsidies cause adverse effects in these global markets, and these findings are entirely consistent with the implications of the U.S. methodology as to the ongoing effects occurring on an annual basis into the future.

29. In proposing countermeasures, the United States did not assume that adverse effects are occurring in particular geographic markets on an annual basis going forward, or attempt to prove new specific instances of adverse effects that will occur in some future period. Rather, the United States calculated the average annual value of the lost sales and product imports and exports impeded from country markets in the December 2011 – 2013 period. Countermeasures at this level would be commensurate with “the degree and nature of the adverse effects determined to exist,” in accordance with SCM Agreement Article 7.9, without regard to whether future instances of significant lost sales involve different customers or future instances of impedance occur in a different set of country markets.

30. The United States also notes that, as a legal matter, subparagraphs (a) and (b) of Article 6.3 of the SCM Agreement call for an evaluation of displacement or impedance on the basis of individual country markets that comprise the global market in which LCA compete. On that basis, the original panel and original appellate reports made findings of displacement with respect to one set of country markets,¹³ while the compliance panel and compliance appellate

¹² Similar arguments are found also in United States' written submission, paras. 5, 77, 87, and 137.

¹³ Original Appellate Report, para. 1414(p).

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reports made findings of impedance with respect to a different set of country markets.¹⁴ Consistent with the adopted findings in this dispute, the U.S. proposed countermeasures reflect that impedance in the global VLA market will occur going forward, but make no assumptions and have no implications as to the individual country markets in which those effects manifest themselves.

- b. Is it the United States' position that the Arbitrator should find the order and delivery data in the reference period used in the compliance proceeding to be: (i) "representative" of future adverse effects, as the European Union uses that term in its written submission; and/or (ii) a "reasonable estimation" of "continued adverse effects of the {subsidies} over time", as those phrases are used in *US – Upland Cotton*?¹⁵**

31. Both. The arbitrator in *US – Upland Cotton (22.6 II)* correctly explained that its role was to determine that “there is a legitimate basis for assuming that the chosen period of reference may lead to a reasonable estimation of these effects,”¹⁶ and that the period immediately following the “reasonable period of time (“RPT”) “is in principle legitimate.”¹⁷ As in *US – Upland Cotton (22.6 II)*, the U.S. approach reflects a period immediately following the RPT. The instances of adverse effects identified in the compliance proceeding are objective and require no speculation. The extent of the adverse effects, reflected in particular lost sales and market share data, was evaluated in detail by a neutral adjudicator following extensive argumentation by the parties. And the compliance proceeding reference period is not somehow broadly atypical or illegitimate. Therefore, it remains the most reliable representation of the adverse effects the LA/MSF subsidies cause.

32. Any other inquiry based on a new reference period would, at minimum, require re-litigation of the adverse effects based on new data from that different period. These assessments of specific lost sales campaigns, for example, have included consideration of, *inter alia*, alleged non-attribution factors. But many of the EU’s alleged non-attribution factors have been “horizontal” rather than customer-specific (*e.g.*, production delays with respect to the competing Boeing aircraft). Consideration of such issues was integral to the causation determination and resulting adverse effects findings in the compliance proceeding. Accordingly, re-litigation of any such non-attribution factors would constitute an improper collateral attack on the “adverse effects determined to exist,” rather than an evaluation of whether the proposed countermeasures are commensurate with the adverse effects determined to exist. That is not the task assigned to an arbitrator under DSU Article 22.6 or Article 7.10 of the SCM Agreement.

¹⁴ Compliance Appellate Report, para. 6.39(a).

¹⁵ Decision by the Arbitrator, *US – Upland Cotton (Article 22.6 – US II)*, para. 4.117. (emphasis added)

¹⁶ *US – Upland Cotton (Article 22.6 II)*, para. 4.117.

¹⁷ *US – Upland Cotton (Article 22.6 II)*, para. 4.118.

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33. As a practical matter, if the Arbitrator picked a different reference period in the past, there is no evidence to suggest that any such period would provide a more “reasonable estimation of the continued adverse effects over time” than the period that served as the basis for the adverse effects determination with which “commensurateness” must be evaluated. In addition, it would largely render the compliance proceeding meaningless. The United States recalls in this regard that this arbitration was suspended specifically so that the compliance proceeding could proceed to its conclusion, and this arbitration could then reflect the compliance findings.

34. Were the Arbitrator to attempt to evaluate a future reference period, it would necessarily invite additional, unnecessary speculation about unverifiable inputs. A valuation of past instances of adverse effects that formed the basis of the DSB’s ultimate findings is more reliable than a calculation highly sensitive to speculative data inputs. The former also is preferable in light of the SCM Agreement’s focus in Article 7.9 on the “adverse effects *determined* to exist.”

35. For these reasons the U.S. approach of valuing the instances of adverse effects underlying the adopted findings is, in the EU’s parlance, representative of the adverse effects LA/MSF subsidies will continue to cause in future years (subject to inflation). And, consistent with *US – Upland Cotton (22.6 II)*, the U.S. approach provides the most reasonable estimation of continued adverse effects over time.

20. With reference to, *inter alia*, paragraphs 82–84 of the United States' written submission, could the United States please clarify the basis on which it interprets the compliance panel's and Appellate Body's findings to stand for the proposition that relevant adverse effects are continued and/or ongoing?

36. The continuing adverse effects of LA/MSF subsidies were the explicit focus of the successful U.S. claim in the first compliance proceeding that “the challenged subsidies *continue to cause* the same types of ‘adverse effects’ today.”¹⁸ At the heart of both the U.S. claim and the compliance findings of continued, or ongoing, adverse effects are the “product effects” of LA/MSF and their operation in the LCA industry where the subsidy-enabled market presence of Airbus LCA has an obvious and direct adverse impact on Boeing LCA.

37. Consistent with the original findings of adverse effects, the compliance findings of adverse effects are based on the “direct” and “indirect” product effects that existing LA/MSF has in enabling Airbus to offer and deliver LCA where it would otherwise be unable to do so. LA/MSF thus allows Airbus to take sales, deliveries, and market share that it would not otherwise obtain, resulting in continued adverse effects to the United States for as long as those product effects operate.

¹⁸ Compliance Panel Report, para. 6.1112 (emphasis original).

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38. In this way, the effects of LA/MSF subsidies differ markedly from those of a subsidy that dissipate in the year of grant and would not have ongoing effects unless renewed on an annual basis. LA/MSF causes adverse effects as long as its product effects enable Airbus to offer and deliver LCA, even if the last disbursement of LA/MSF subsidies occurred several years earlier. Below, the United States identifies some of the findings that existing LA/MSF’s adverse effects are of a continuing, or ongoing, nature.

39. In DSB-adopted findings, the compliance panel described how the direct and indirect effects of LA/MSF operate over time, and how their continued operation is tantamount to a continued “genuine and substantial” relationship of cause and effect between LA/MSF subsidies and adverse effects:

- “{W}e believe that it follows from the findings made by the panel and the Appellate Body in the original proceeding, that the duration of the direct effects of any particular LA/MSF measure should be determined on the basis of the extent to which those effects support the market presence of the specifically funded aircraft over time. Where the facts show that the very existence and ongoing market presence of a particular aircraft programme is dependent upon specifically designated LA/MSF funding, then as a matter of logic, it is likely that the direct effects of that LA/MSF will continue to be felt throughout the marketing life of the specifically funded aircraft.¹⁹
- “{W}e believe that it follows from the findings made by the panel and Appellate Body in the original proceeding, that the duration of the indirect effects of LA/MSF should be determined on the basis of the extent to which the ‘learning’, scope and financial effects associated with any given LA/MSF measure provided for the purpose of one specific model of LCA support the market presence of one or more other models of LCA over time. Thus, where the very existence and ongoing market presence of an LCA is dependent upon the ‘learning’, scope and financial effects resulting from one or more prior LA/MSF subsidies, it is likely that the indirect effects of those prior LA/MSF subsidies will continue to be felt throughout the marketing life of the relevant aircraft programme.”²⁰

40. The parties in the first compliance proceeding litigated exhaustively over whether the product effects of A380 and A350 XWB LA/MSF subsidies, and therefore adverse effects, continued into the post-implementation period. The United States argued in the compliance proceeding that “because of *inter alia* the design, structure and operation of LA/MSF, the magnitude of the LA/MSF subsidies and the long product life cycles of LCA, the effects of the challenged LA/MSF subsidies are of such a profound and long-lasting nature that, on the whole,

¹⁹ Compliance Panel Report, para. 6.1508.

²⁰ Compliance Panel Report, para. 6.1513.

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the same ‘product’ effects found to exist in the 2001-2006 period continue to be present today.”²¹
As the compliance panel observed,

the European Union’s core argument in response to the United States’ allegations concerning the present-day ‘product’ effects of the challenged LA/MSF subsidies is centred around its view that any effects found to exist up to the end of 2006 have today either: (a) dissipated over time; or (b) been significantly attenuated by a number of non-subsidized Airbus investments in the A320 and A330. Additionally, and in the alternative, the European Union submits that any lingering present-day effects of the challenged LA/MSF subsidies are not the cause of any present adverse effects because the United States’ claims of Boeing lost sales and displacement in the various LCA product markets can be explained by a number of different factors that are unrelated to the effects of LA/MSF.²²

41. Relying in large part on the compliance panel’s findings, the appellate report concluded that existing subsidies did indeed continue to cause adverse effects into the post-implementation period, and it did so in terms that leave no doubt as to the ongoing nature of LA/MSF’s adverse effects:

- “The original panel’s findings, together with the Panel’s analysis, indicate that these ‘direct effects’ of A380 LA/MSF *continued after the original reference period*, given that the A380 LA/MSF subsidies had not expired, as well as the fact that Airbus continued to receive significant sums of money as disbursements under the French, German, and Spanish A380 LA/MSF contracts at a time when it was experiencing severe financial difficulties resulting from the extensive production delays in the A380 programme.”²³
- “{O}ur discussion of the Panel’s findings reveals 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. Both these events, as the above analysis shows, *were crucial to renew and sustain Airbus’ competitiveness in the post-implementation period.*”²⁴

²¹ Compliance Panel Report, para. 6.1485.

²² Compliance Panel Report, para. 6.1481.

²³ Compliance Appellate Report, para. 5.609 (emphasis added).

²⁴ Compliance Appellate Report, para. 5.647 (emphasis added).

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- “With regard to lost sales in the twin-aisle LCA market, our review of the Panel’s finding on the product effects of LA/MSF subsidies on the A350XWB indicates that, in the absence of the LA/MSF subsidies existing in the post-implementation period (i.e. after 1 December 2011), Airbus would not have been able to offer the A350XWB at the time it did and with the features it had.”²⁵
- “{T}he Panel’s findings support the conclusion that the sales of the A350XWB identified in Table 19 of the Panel Report represent ‘significant lost sales’ to the US LCA industry within the meaning of Article 6.3(c) of the SCM Agreement, and that such lost sales were the effect of the LA/MSF subsidies existing in the post-implementation period. This conclusion also finds support in the analytical framework adopted by the panel and the Appellate Body in the original proceedings, as well as in a number of the Panel’s findings, *including its finding concerning the ‘product effects’ of the LA/MSF subsidies existing in the post-implementation period on Airbus’ timely launch of the A350XWB*, and the existence of sufficient substitutability between Boeing’s and Airbus’ twin-aisle product offerings.”²⁶
- “{T}he 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, therefore, that the LA/MSF subsidies existing in the post-implementation period *are* a genuine and substantial cause of serious prejudice to the United States within the meaning of Article 6.3(c) of the SCM Agreement.”²⁷
- “{T}he Panel’s findings support the conclusion that the sales of the A380 identified in Table 19 of the Panel Report represent ‘significant lost sales’ to the US LCA industry within the meaning of Article 6.3(c) of the SCM Agreement, and that such lost sales were the effect of the LA/MSF subsidies existing in the post-implementation period. This conclusion also finds support in the analytical framework adopted by the panel and the Appellate Body in the original proceedings, as well as in a number of the Panel’s findings, including its finding concerning *the ‘product effects’ of the LA/MSF subsidies existing in the post-implementation period on Airbus’ continued offering of the A380*, and the existence of sufficient substitutability between Boeing’s and Airbus’ VLA product offerings.”²⁸

²⁵ Compliance Appellate Report, para. 6.30.

²⁶ Compliance Appellate Report, para. 6.31 (emphasis added).

²⁷ Compliance Appellate Report, para. 6.31(a) (emphasis added).

²⁸ Compliance Appellate Report, para. 6.37 (emphasis added).

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- “{T}he orders identified in Table 19 of the Panel Report in the VLA market represent ‘significant lost sales’ to the US LCA industry and, therefore, that the LA/MSF subsidies existing in the post-implementation period *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.”²⁹
- “{T}he Panel's findings reviewed above support the conclusion that the effect of the LA/MSF subsidies existing in the post-implementation period is impedance of US VLA in the VLA markets in the European Union, Australia, China, Korea, Singapore, and the United Arab Emirates. This conclusion also finds support in the analytical framework adopted by the panel and the Appellate Body in the original proceedings, as well as in a number of the Panel’s findings, including its finding concerning *the ‘product effects’ of the LA/MSF subsidies existing in the post-implementation period on Airbus’ continued offering of the A380*, and the existence of sufficient substitutability between Boeing's and Airbus' VLA product offerings.”³⁰
- “{T}he United States has established that the ‘product effects’ of the LA/MSF subsidies existing in the post-implementation period *are* a genuine and substantial cause of impedance of US LCA in the VLA markets in the European Union, Australia, China, Korea, Singapore, and the United Arab Emirates.”³¹

42. Finally, with respect to existing LA/MSF, the Appellate Body upheld the compliance panel’s conclusion that “{b}y *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 have 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’.”³²

43. In sum, the DSB adopted findings both that existing LA/MSF subsidies have adverse effects of an ongoing, or continuing, nature, and that the subsidies were continuing to cause – in the present tense – such adverse effects throughout the post-implementation period. Thus, there is no merit to the EU’s objections to annual countermeasures, or its attempts to again limit the adverse effects caused by LA/MSF to the specific instances identified in the reference period.

²⁹ Compliance Appellate Report, para. 6.37(a) (emphasis added).

³⁰ Compliance Appellate Report, para. 6.42 (emphasis added).

³¹ Compliance Appellate Report, para. 6.42(a) (emphasis added).

³² Compliance Appellate Report, para. 6.43(a) (emphasis added).

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For both parties

21. With reference to, inter alia, paragraph 90 of the Methodology Paper, and paragraphs 122, 125–126, 129, and 334 of the European Union's written submission, could the parties please identify any previous Article 22.6 arbitrations that have specifically addressed the circumstances under which it would be appropriate to authorize annually recurring countermeasures or suspension of concessions or other obligations "for an indefinite period and total amount" (as the European Union uses that phrase in section VII of its written submission) calculated on the basis of a counterfactual applied to a past reference period? If appropriate, please provide the relevant references.

44. There has only been one previous arbitration under SCM Agreement Article 7.9 related to countermeasures commensurate with the degree and nature of the adverse effects determined to exist – *US – Upland Cotton (22.6 II)*. The arbitrator there did provide for annual countermeasures calculated on the basis of a counterfactual applied to a past reference period.³³ The arbitrator observed:

In a situation where a fixed annual amount of countermeasures is determined, that will be applied in the future and for an undetermined period of time, there is necessarily an inherent uncertainty as to how closely the said amount will represent the actual continued adverse effects of the measure over time. What we must ensure, however, is that there is a legitimate basis for assuming that the chosen period of reference may lead to a reasonable estimation of these effects.³⁴

The arbitrator then concluded that Brazil's reliance on a particular year in the past, "which represents the first moment at which the United States should have come into compliance with the recommendations and rulings at issue by removing the adverse effects of the subsidies or withdrawing them, is in principle legitimate."³⁵

45. The *US – Upland Cotton (22.6 II)* arbitrator also noted that "the end of the implementation period has been chosen as {sic} period of reference in arbitrations under Article 22.6 of the DSU previously."³⁶ In addition, *annual* countermeasures or suspension of concessions or other obligations have been awarded in 18 of the 20 DSU Article 22.6 reports to date.³⁷ Thus, annual countermeasures (or suspension) have been the norm, rather than the exception.

³³ See *US – Upland Cotton (22.6 II)*, paras. 4.115-4.119, 6.5(a).

³⁴ *US – Upland Cotton (22.6 II)*, para. 4.117.

³⁵ *US – Upland Cotton (22.6 II)*, para. 4.118.

³⁶ *US – Upland Cotton (22.6 II)*, para. 4.118.

³⁷ *EC – Bananas III (22.6 – US)*, para. 8.1; *EC – Bananas III (22.6 – Ecuador)*, para. 173(a); *EC – Hormones (22.6 – Canada)*, para. 72; *EC – Hormones (22.6 – US)*, para. 83; *Brazil – Aircraft (22.6)*, paras. 4.1-4.2; *US – FSC (22.6)*, para. 8.1; *US – Offset Act (Byrd Amendment) (22.6 – Brazil)*, para. 5.2; *US – Offset Act (Byrd*

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46. Here, the United States requests that the level of annual countermeasures be valued according to the identified instances of adverse effects in the period immediately following the end of the implementation period. This approach is not only consistent with the *US – Upland Cotton (22.6 II)* report, but also with the focus in SCM Agreement Article 7.9 on the adverse effects *determined* to exist, as well as the parties’ sequencing agreement, which suspended this arbitration so that the arbitration would reflect adopted findings from the initial compliance proceeding.

47. Finally, in *US – Upland Cotton (22.6 II)*, the arbitrator did “not exclude that there may have been different permissible approaches to the choice of period of reference for the purposes of such calculations.”³⁸ The arbitrator correctly observed, however, that the responding party must establish not that there may be alternatives, but rather that the proposed reference period “would lead to countermeasures that would not be ‘commensurate’ within the meaning of Article 7.9.”³⁹ Thus, even if there were other alternatives to the U.S. approach, this would be insufficient by itself to justify a departure from this approach.

22. With reference to paragraph 334 of the European Union's written submission, could the parties please explain what, in a dispute such as this, where “sales of LCA tend to be very large, in terms of numbers of aircraft and dollar amounts, but relatively infrequent”⁴⁰, would make one reference period any more “representative” than another?

48. There is no factor in the abstract that would suggest that one period is somehow more “representative” than another. Focusing on the period evaluated in the compliance proceeding is consistent with the text of the SCM Agreement and provides a reasonable and reliable estimate of the adverse effects the subsidies were found to cause.

49. As the United States has explained elsewhere,⁴¹ valuing the instances of adverse effects found by the DSB is faithful to the text of the SCM Agreement, which requires the countermeasures to be commensurate with the adverse effects *determined* to exist. In addition, it minimizes speculation by focusing on observed and verifiable facts that have already been

Amendment) (22.6 – Chile), para. 5.2; US – Offset Act (Byrd Amendment) (22.6 – EC), para. 5.2; US – Offset Act (Byrd Amendment) (22.6 – India), para. 5.2; US – Offset Act (Byrd Amendment) (22.6 – Japan), para. 5.2; US – Offset Act (Byrd Amendment) (22.6 – Korea), para. 5.2; US – Gambling (22.6), para. 6.1; US – Upland Cotton (22.6 I), para. 6.5; US – Upland Cotton (22.6 II), para. 6.5; US – COOL (22.6 – Canada), para. 7.1; US – COOL (22.6 – Mexico), para. 7.1; US – Tuna II (22.6), para. 18.

³⁸ *US – Upland Cotton (22.6 II)*, para. 4.116.

³⁹ *US – Upland Cotton (22.6 II)*, para. 4.116

⁴⁰ Panel Report, *EC and certain member States – Large Civil Aircraft*, para. 1.1719. (fn omitted)

⁴¹ See, e.g., *supra*. U.S. response to Question 19(b); U.S. Written Submission, para. 237.

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evaluated as part of the basis of this arbitration.⁴² Furthermore, it avoids re-litigation of compliance issues, which the EU improperly seeks through its criticisms of the countermeasures proposed by the United States.

1.2.2 Lost Sales

For the European Union

- 23. With reference to footnote 185 of the European Union's written submission, could the European Union please further explain its position that the Arbitrator should not value both orders and deliveries when the compliance panel and Appellate Body found that both orders and deliveries constitute adverse effects, and those orders and deliveries were both found to have occurred within the relevant reference period? Is this position based in whole or in part on the European Union's arguments to the effect that "trade effects" only arise at the time of actual delivery, rather than the time of order?**
- 24. With reference to paragraph 162 of the United States' written submission, could the European Union please address whether the 2013 Emirates lost sale resulted in no deliveries upon which the Appellate Body based its impedance findings?**
- 25. With reference to section VIII.C of the European Union's written submission, and the penultimate sentence of paragraph 145 of the United States' written submission, could the European Union please clarify how the Arbitrator could ensure that the "countermeasures ... be distributed over time so as to correspond to the occurrence over time of the trade effects that arise – i.e., the deliveries that relate to the adverse effects determined to exist"?**
- 26. With reference to, inter alia, paragraphs 156 and 187 of the European Union's written submission, and paragraphs 135–136 and 148 of the United States' written submission, could the European Union please elaborate on its apparent position that the Arbitrator must value actual trade effects (i.e. exports at the time of export) and not anticipated trade effects? In particular, to what extent is this position supported by previous arbitrators' reports?**
- 27. With reference to paragraph 172 of the European Union's written submission, could the European Union please explain the difference between:**
 - a. the number of A380 aircraft delivered in 2018 as indicated in the text (9) and as indicated in Table 1 (5); and**
 - b. the number of outstanding deliveries of the same aircraft in 2021 as indicated in the text (38) and as indicated in Table 1 (8+14+6=28)?**
- 28. With reference to paragraph 246 of the European Union's written submission, could the European Union please explain how, in case relevant pricing information was unavailable, the price data contained in the "comparator orders" proposed by the United States should be adjusted downwards on the basis of the difference in order size,**

⁴² See *US – 1916 Act (22.6)*, para. 5.54 (finding that it should rely, as much as possible, on credible, factual, and verifiable information," and avoid speculation where possible).

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delivery position and price discounts that Boeing customers in the four campaigns at issue would have received?

29. With reference to paragraphs 290 and 342 of the European Union's written submission, could the European Union please explain:

- a. the steps the Arbitrator would take to calculate the "appropriate" discount factor taking into account the three elements listed in paragraph 272 of the European Union's written submission and whether this "appropriate" discount factor would be readily available; and**
- b. whether the LCA manufacturers' weighted average cost of capital (WACC) mentioned in paragraph 342 would constitute an "appropriate" discount factor as referred to in paragraph 290?**

30. With reference to footnote 171 of the European Union's written submission, could the European Union please clarify:

- a. On what date, exactly, was the Transaero order cancelled?**
- b. How much money did Airbus receive, if any, pursuant to the Transaero order that was cancelled?**

31. With reference to paragraphs 215–216 of the United States' written submission concerning price-information submitted by the United States, could the European Union please respond to the arguments contained therein?

For the United States

32. With reference to footnote 242 of the European Union's written submission, could the United States please explain how much money Boeing received, if any, pursuant to the Transaero 747-8I order from 2013 that was ultimately cancelled?

50. **[[HSBI]].⁴³**

33. With reference to paragraphs 42–45 and section III.A.2 of the Methodology Paper and paragraph 223 of the United States' written submission, could the United States please clarify what amount of money, specifically, is being "escalated" (using the escalation formula) and then "discounted" (using the discount rate)?

- a. Is the amount escalated only the amount due at or around the time of delivery, or the entire amount including the money due upon order and in the PDPs? Please provide an example to illustrate how escalation occurs with respect to payments due at different times and an indication whether this illustration represents a uniform practice by Boeing.**

51. Typically, an LCA producer and an airline customer will agree to the sale of a specified number of aircraft based on an “airplane gross price” set in U.S. dollars. The [BCI]. At

⁴³ Boeing E-mail regarding First Set of Arbitrator Questions (Exhibit USA-30(HSBI)).

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delivery, price concessions will be subtracted from the delivery gross price to determine the “net price.” The customer owes the net price, minus any PDPs it has made, at the time of delivery.

52. PDP terms provide that the customer will pay [BCI].⁴⁴ When a PDP is made, [BCI].

53. As an example, suppose:

- The [BCI] price of an aircraft is \$90 in base-year dollars in year X when the aircraft is ordered. (The base year, in this instance, is the order year.)
- An aircraft is scheduled to be delivered in year X+5.
- The contract requires just one PDP of five (5) percent, due 18 months prior to delivery.
- The [BCI] \$100. (Recall that [BCI].
- There are no price concessions so [BCI].

54. In this example, the customer would be responsible for making a PDP 18 months before delivery of \$5 (*i.e.*, 5 percent of the \$100 [BCI] price). If the [BCI].

55. Boeing [BCI]. Each contract is negotiated separately. However, PDPs are typical of all contracts. Often, a [BCI] amount, [BCI] percent, is due at the time of order. PDPs then [BCI] as delivery approaches. At the time delivery is made, the customer must pay the net price minus any PDPs it has made.

56. Because the [BCI]. Thus, if [BCI] percent is due at the time of order, [BCI].

- b. Is the amount being discounted the money that would be paid to Boeing at the time of delivery or the total amount of money that Boeing would receive for the sale, including any money due upon order and/or PDPs? If it is the latter, what is the rationale for applying the same discount rate to amounts of money to be received at different times?**

57. The amount being discounted is the entire net price of the aircraft. In terms of Boeing’s cash flows or revenues, this price consists of money due upon order, plus other PDPs, plus money due at the time of delivery. However, the United States discounts the entire net price from the date of delivery.

⁴⁴ See Cathay Pacific 777-300ER Order Information (Exhibit USA-12(HSBI)); Transaero 747-8I Order Information (Exhibit USA-13(HSBI)); Singapore Airlines 787-10 Order Information (Exhibit USA-14(HSBI)); United Airlines 777-300ER Order Information (Exhibit USA-15(HSBI)).

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58. Thus, returning to the example above, if the delivery price were projected to be \$100, with \$5 due 18 months prior to delivery, and \$95 due upon delivery, the United States would simply discount the entire \$100 from the date of delivery. This makes the U.S. calculation conservative. Because pre-delivery payments move payments up in time, they increase the present value of a given stream of principal. That is, if the \$5 PDP were subject to 18 months less discounting, the discounted value at the time of order would be higher. Thus, complicating the present value discounting calculation to account for the fact that some of the payments are made prior to delivery would only increase the valuation of the adverse effects determined to exist. For this reason, the U.S. methodology is conservative.

59. The United States notes that, as a legal matter, Article 5 of the SCM Agreement frames WTO inconsistency in terms of “adverse effects to the interests of other Members” and “serious prejudice to the interests of another Member,” which are not necessarily equivalent to a particular company’s cash flows or revenues. The United States has based its calculation of the aircraft value on prices escalated to the year of delivery because that is the mechanism used in LCA purchase contracts to set the price paid for each contract and, as such, provides the best indication of the value of the aircraft.

60. With respect to the final question, the discount rate is an annualized rate. But that annual rate can be used to discount for any period of time, and it compounds over longer periods. Thus, application of the same annual rate to periods of different lengths would result in different “overall discount rates.”

61. Suppose, contrary to reality, that the United States discounted PDPs from the time they were made, and discounted only the balance due upon delivery from the time of delivery. Suppose further that, pursuant to an order in year X, delivery was scheduled in year X+7 at a price of \$100, and a PDP of 50 percent was due in year X+5. Thus, the customer owed \$50 in year X+5 and the remaining \$50 in year X+7. Suppose further that the United States used a discount rate of one percent. The calculation would apply “the same discount rate” (*i.e.*, one percent) “to amounts of money to be received at different times.” But the discounted \$50 PDP, subject to five years of discounting, would have an order year value of \$47.57. By contrast, the discounted \$50 delivery payment, subject to seven years of discounting, would have an order year value of \$46.64.

62. To reiterate, however, the U.S. formula would simply subject the full \$100 price to seven years of discounting. In the simple example above, this would result in a present value of \$93.27, whereas the present value of the \$100 order would be \$94.21 if PDPs were taken into account.

34. With reference to paragraph 42 of the Methodology Paper, could the United States please elaborate on the relationship between the PDPs and the escalation factors reported in the order information provided in Exhibits USA-12 to USA-16?

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63. With respect to the order information provided in Exhibits USA-12 (HSBI) to USA-15 (HSBI), the reported PDP and escalation terms are those that Boeing and the respective customer agreed to at the time the firm order was placed through the execution of a definitive purchase agreement (also known as a “definitive agreement” or “DA”). The PDP terms provide that the customer will pay [BCI].⁴⁵ The [BCI] that is used as the basis for determining PDP payment amounts is [BCI].⁴⁶

64. When Boeing delivers an aircraft, the customer pays an amount equal to:

(1) the airplane gross price, [BCI];

minus

(2) Concessions, or discounts, from the airplane gross price;

minus

(3) PDPs, which [BCI].⁴⁷

65. With respect to the information provided in Exhibit USA-16 (HSBI), Boeing [BCI].⁴⁸

35. With reference to paragraphs 37, 42, and 46 of the Methodology Paper, where the United States explains that, for four out of the five lost sales, the United States took terms from actual Boeing sales contracts – but a hypothetical delivery schedule – to construct the value of the sales, could the United States please comment on the impact that this hypothetical delivery schedule would have on the contracts' actual price or other terms (e.g. the escalation formula) insofar as the hypothetical delivery schedule departs from the actual delivery schedule contained in the contracts?

66. As this question notes, in order to value the Cathay Pacific, Transaero, Singapore Airlines, and United lost sales, the United States calculated counterfactual Boeing per-airplane prices based on (i) actual contracted Boeing per-aircraft prices to the same customer for the closest Boeing model, and (ii) Boeing’s estimate of the delivery schedule Airbus and the customer agreed to at the time of the lost sales in 2012 – 2013. Those contracted Boeing per-aircraft prices are initially expressed in base-year dollars and are subject to price escalation through formulae agreed with the respective customers. Consequently, the net per-aircraft price in the year of delivery will be higher than the price expressed in base-year dollars.

⁴⁵ See Cathay Pacific 777-300ER Order Information (Exhibit USA-12(HSBI)); Transaero 747-8I Order Information (Exhibit USA-13(HSBI)); Singapore Airlines 787-10 Order Information (Exhibit USA-14(HSBI)); United Airlines 777-300ER Order Information (Exhibit USA-15(HSBI)).

⁴⁶ Boeing E-mail regarding First Set of Arbitrator Questions (Exhibit USA-30(HSBI)).

⁴⁷ Boeing E-mail regarding First Set of Arbitrator Questions (Exhibit USA-30(HSBI)).

⁴⁸ Boeing E-mail regarding First Set of Arbitrator Questions (Exhibit USA-30(HSBI)).

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67. All else equal, a change in the scheduled delivery year of an aircraft will, by virtue of the escalation terms, result in a change to the estimated per-aircraft price in the year of delivery.⁴⁹ For example, if the delivery schedule in the definitive agreement calls for an aircraft to be delivered in 2018, but the customer actually takes delivery in 2019, then the delivery-year price of the aircraft will be higher (when expressed in nominal, delivery-year dollars) under the latter scenario because the later delivery year means additional price escalation.⁵⁰ However, the base-year per-aircraft price will be the same under either scenario.

36. With reference to Exhibits USA-12 (HSBI) to USA-16 (HSBI), could the United States please explain why unlike in the case of impedance where the United States provided price information expressed in [BCI], the United States provided information expressed in [BCI] in relation to lost sales?

68. The price information for impedance is expressed in [BCI] because [BCI]. The price information for lost sales is expressed in [BCI].

37. With reference to paragraph 51 and section III.A.2 of the Methodology Paper, could the United States please explain why, in its view, a ten-year debt instrument is appropriate for measuring the discounted value of a delivery price back to the year in which the associated order occurred, when the time difference between the order and delivery dates are usually significantly less than ten years?

69. As described in the Methodology Paper, the U.S. calculation of the adverse effects values the counterfactual Boeing aircraft associated with the identified lost sales. The best indicator of the value of a good is the price the customer agreed to pay for it. Boeing's sales agreements set a [BCI] price that the customer ultimately must pay for a particular aircraft. This [BCI] price is determined by subtracting price concessions from a [BCI] price, and that [BCI] price is determined by [BCI]. Therefore, the [BCI] price the customer must ultimately pay is expressed in delivery-year dollars.

70. The instances of adverse effects to the interests of the United States that were determined to exist, in the form of significant lost sales, occurred in the 2012 – 2013 period. Therefore, the airplane values that reflect delivery-year prices must be discounted to determine the value of the instances of significant lost sales suffered by the United States in the 2012 – 2013 period. The correct rate to calculate this “present value” to the United States is the interest rate on U.S. sovereign debt.

71. U.S. sovereign debt is issued in bonds of varying terms. The prices and yields of bonds are determined partially by the term of the bond, or the period over which payments are made.

⁴⁹ Boeing E-mail regarding First Set of Arbitrator Questions (Exhibit USA-30(HSBI)).

⁵⁰ In addition, while the United States omitted pre-delivery payments (“PDPs”) in its methodology to be conservative and to simplify the calculations, the amount and timing of PDPs would change if the delivery year were changed. For further discussion of how PDPs are calculated, please see the U.S. response to Question 34.

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The rate for a short-term bond (*e.g.*, one year) may reflect near-term market disruptions, and thus may not represent “steady state” equilibria. On the other hand, a very long-term bond (*e.g.*, thirty years) may fail entirely to capture economic conditions prevalent at the time of issuance.

72. The United States adopted a conservative approach in using a ten-year bond in its calculations. A ten-year bond both reflects market conditions at the time of issuance but is also less impacted by near-term market disruptions. Further, the yields on shorter-term bonds during 2012 and 2013 were lower than the yield on the 10-year bond during the same period, and lower yields result in a higher discounted present value, which would mean a higher level of countermeasures. Thus, by using the rate on the 10-year bond rather than the rate on the one-year or three-year bond, the United States has employed a conservative methodology. The United States agrees, however, that a shorter-run bond yield that more closely corresponds to the actual length of time between order and delivery dates at issue in this proceeding would be methodologically justified.

38. With reference to paragraphs 256–259 of the United States' written submission, could the United States please elaborate as follows on the different "purposes" of the relevant escalation formulae upon which it relies and the PPI used as the "inflater":

- a. **Could the United States please explain this difference in light of the statement in footnote 5199 in the original panel report that "{b}ecause LCA are often delivered years after the original order, both Airbus and Boeing generally apply a standard 'price escalation' formula that adjusts the order price (in order year dollars) for inflation in aircraft manufacturing costs to determine the price payable for the aircraft on delivery (in delivery year dollars)" and the United States' explanation that the PPI enables the countermeasures "to keep pace with inflation"⁵¹ by adjusting for "changes in the costs of manufacturing aircraft"?**

73. It is generally true that escalation formulae are a tool to adjust prices from the base year to the year of delivery to account for changes in LCA manufacturing costs. However, escalation formulae (including any indices and other parameters) [BCI].⁵² Compared to those escalation formulae, the U.S. Producer Price Index for Aircraft Manufacturing of Civilian Aircraft (“PPI”) does not represent a radically different metric. However, as explained in greater detail in subpart (b), the different indices differ to some degree, and their uses in the U.S. methodology serve different purposes.

- b. **Are the relevant escalation formulae based on the PPI, and if so, how? What is the rationale for basing the escalation formulae on, for example, a [BCI]⁵³ but basing the inflater on a [BCI] cost index (i.e. the [BCI])?⁵⁴**

⁵¹ United States' written submission, para 259. (emphasis added)

⁵² Compare [BCI].

⁵³ Exhibit USA-5 (BCI), para. 4.

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74. The relevant escalation formulae in the purchase contracts at issue in this arbitration are [BCI]. They are based on [BCI]. The rationale for the U.S. methodology’s use of escalation formulae and PPI is not based on [BCI], but rather is due to the different purposes for which the United States uses them.

75. Escalation formulae are [BCI]. They generally capture expected overarching changes in [BCI], as well as reflect [BCI]. In valuing lost sales, the United States uses [BCI] arrive at a net price for each airplane, which in turn is the best proxy for the value of the closest competing Boeing aircraft that would have been sold to a specific customer absent the subsidies. Thus, it is appropriate to use the [BCI] escalation formulae, [BCI], to adjust prices for changes in costs between order and delivery (or any other rationale) as agreed to by the contracting parties.

76. The distinct purpose of the time consistency/inflation adjustment included in the calculation is to account and control for the fact that the value of the adverse effects determined to exist is expressed in 2013 dollars, but the nominal dollar value of equivalent significant lost sales and impedance would be higher in a later year. This adjustment keeps the countermeasures commensurate with the degree and nature of the adverse effects determined to exist in subsequent years in which the EU’s WTO-inconsistent subsidies continue to cause significant lost sales and impedance of U.S. LCA.

77. The escalation factors – [BCI] – would be unsuitable to use as an “inflator” for the purpose of re-stating the total level of adverse effects determined to exist, from 2013 dollars, to the equivalent value in the year in which countermeasures would be applied. Rather PPI, which “measures price change from the perspective of the seller” generally,⁵⁵ is appropriate for this purpose. The U.S. Bureau of Labor Statistics publishes Producer Price Indices that track movements in the prices that are obtained by suppliers/manufacturers in various industries, including the aircraft industry. These indices are analogous to the CPI that is commonly used to perform inflation/cost-of-living adjustments for matters relating to consumers. The difference is that PPIs track prices received by business-to-business suppliers/manufacturers, rather than prices paid by end consumers. Thus, the PPI for commercial aircraft manufacturing presents a natural index to use to control for movements in the prices over time of LCA supplied by the U.S. LCA industry.

78. Consequently, the PPI presents a reasonable proxy for the increased dollar value of the LCA covered by lost sales and impedance findings over time. Additional advantages of the PPI are that it is a publicly available index, is published by a government institution and is therefore unlikely to be subject to manipulation by industry participants, is regularly updated, and is general across customers. These virtues make PPI a useful and appropriate means for annually

⁵⁴ See Methodology Paper, section IV.

⁵⁵ Producer Price Indexes – Program Overview, U.S. Department of Labor, Bureau of Labor Statistics (Exhibit USA-20).

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adjusting the total level of adverse effects (expressed in 2013 dollars and covering both lost sales and impedance) to present year dollars. The United States is not aware [BCI]. Thus, the use of the PPI represents the best possible available tool for the purpose it serves in the U.S. methodology.

79. Finally, because of the [BCI] nature of the contractual escalation provisions, their use in the annual countermeasures calculation would make that calculation exceedingly and unnecessarily complex. Rather than having a single annual dollar amount stated in 2013 dollars to be “inflated,” [BCI]. Moreover, there would be no relevant contractual provision corresponding to the value calculated for impedance.

39. With reference to paragraph 57 of the Methodology Paper, could the United States please explain why [BCI] is set as the base year to determine the aircraft delivery prices in the case of the Cathay Pacific order? Could the United States explain more specifically why the difference between the escalation factors associated with this contract and the discount rate is [BCI] than in the case of the other contracts?

80. From 2005 through the present, Cathay Pacific has ordered a total of 49 777-300ERs, including an initial tranche of 12 firm orders in 2005, as well as the three (3) firm orders in 2013 that were the source of the per-aircraft price data used to value the 2012 Cathay Pacific lost sale.⁵⁶ The base year in Boeing’s 2013 777-300ER contract is [BCI] because [BCI]. The 2013 follow-on sale to Cathay used [BCI] the 2013 deal.⁵⁷

81. As to the second part of this question, the difference between the Cathay Pacific escalation factors and the discount rate is [BCI] compared to the other four lost sales calculations because of [BCI]. For all five lost sales, the discount rate is based on the 10-year Treasury bond yield, but the escalation factors for each of the lost sales calculations is based on the escalation factors from the corresponding Boeing contracts [BCI]. In the case of the Cathay Pacific 777-300ER contract, [BCI].

82. There is [BCI] those contracted escalation factors are [BCI] aircraft Boeing would have sold in the absence of the subsidies. However, this situation does highlight the [BCI], which confirms that they are inferior to the PPI for the purpose of adjusting the total level of adverse effects from 2013 dollars to the year for which countermeasures will be applied. The United States elaborates on this point in response to Question 38.

For both parties

⁵⁶ See Orders & Deliveries – Cathay Pacific 777-300ER Orders (2005-2013), Boeing Website (Exhibit USA-31). See also U.S. Methodology Paper, paras. 46, 56-60; *Cathay Pacific Announces Additional Aircraft Order*, Cathay Pacific Press Release (Dec. 27, 2013) (Exhibit USA-6).

⁵⁷ See Boeing E-mail regarding First Set of Arbitrator Questions (confirming this factual account) (Exhibit USA-30(HSBI)).

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40. With reference to the options identified below, which is/are the best data to use to determine what the US LCA industry's counterfactual delivery schedule would have been in relation to the orders that represent the "lost sales" in this proceeding:

- a. **The delivery schedule contained in Airbus' sales contracts concluded in connection with these orders?**
- b. **The delivery schedule for Airbus aircraft ordered in the lost sales campaigns at issue, as of the time of order, as estimated by Boeing and used by the United States in its methodology paper?**
- c. **The actual delivery dates of Airbus LCA that were delivered pursuant to the sales contracts concluded in connection with these orders?**
- d. **The Ascend Database's estimated delivery dates for the Airbus LCA that will be delivered pursuant to the sales contracts concluded in connection with these orders?**
- e. **Boeing's delivery schedule contained in Boeing's [BCI] sales campaign that was lost to Airbus, at least vis-à-vis [BCI]?**
- f. **Boeing's delivery schedules in the sales contracts concluded in connection with the "comparator orders", as the European Union uses that phrase in its written submission?**
- g. **The delivery schedule contained in Boeing's [BCI]?**
- h. **The actual delivery dates of Boeing LCA that were delivered pursuant to the sales contracts concluded in connection with the "comparator orders"?**
- i. **The Ascend Database's estimated delivery dates for the Boeing LCA that will be delivered pursuant to the sales contracts concluded in connection with the "comparator orders"?**
- j. **Some other data source?**

83. The best data would be those in (a), the delivery schedules in Airbus's sales contracts in the relevant orders. These are the best indication of what the customer would have accepted and characterize the sale that the U.S. LCA industry lost according to the DSB's findings. However, the United States is not in possession of these data.

84. The second best data are those in (b), the Boeing estimates of the data in (a). Boeing has considerable expertise and knowledge of the industry, and based on this expertise and the resources at its disposal, provided the best (and only) estimates on the record. In the absence of the actual delivery schedules, which only the EU presumably can produce, these estimates should be accepted.

85. The remaining alternatives introduce more significant risks of inaccuracy. The actual delivery dates (as indicated in (c)) reflect conditions that arose after the compliance proceeding

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reference period and therefore are not reflected in the adopted findings – *i.e.*, the adverse effects determined to exist. Moreover, they reflect circumstances specific to Airbus’s aircraft, operations, and relationships. There is no valid basis to assume that changes to the contractual terms after the contracts were signed, or Airbus-specific contractual terms, would have manifested had Boeing won the sale.

86. Presumably, the data in (d) is meant to account for the fact that no actual dates, as proposed in (c), exist for deliveries not yet made. Thus, these data would have the same flaws as the data in (c). They are simply projections of what the data in (c) will be.

87. The data in (e), Boeing’s [BCI] sales campaign that was lost to Airbus, are less reliable because they reflect [BCI], rather than [BCI]. However, it would be a reasonable estimate to use if there were not better data.

88. With respect to the data in (f), these comparator orders were made in a world in which Airbus made the sales that Boeing “lost” as a result of the subsidies. Therefore, they necessarily reflect the effect of the Airbus sale on the customer’s fleet. The additional sales that Boeing would have made in the absence of the subsidies would complement the comparator sales, not be identical to them.

89. The data in (g) are essentially the same as the data in (f), except that they are based on [BCI]. Therefore, they suffer from the same flaws as the data in (f).

90. The data in (h), the actual delivery dates of the comparator orders, combine the flaws in (f) – terms that complement rather than approximate the terms of the lost sales – with some of the flaws in (c) – namely, the incorporation of developments after the reference period in the compliance proceeding, which therefore are not part of the basis for the determination of adverse effects.

91. Presumably, the data in (i) is meant to account for the fact that no actual dates, as proposed in (h), exist for deliveries not yet made. Thus, these data would have the same flaws as the data in (h). They are simply projections of what the data in (h) will be.

92. The United States is not aware of any other data source that should be considered. If the EU produces the actual Airbus delivery schedules from the time of order (option (a)), those dates should be used. Otherwise, the Boeing estimates of those data (option (b)) should be used.

41. With reference to paragraph 40 of the Methodology Paper, which states that “{t}he value of a lost sale is the value of the *airplanes* the U.S. LCA industry would have sold” (emphasis added), could the parties please clarify whether there are services – especially post-delivery services – captured in the sales price that are included in any

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LCA sales contracts that the parties consider the Arbitrator should not take into account to derive the value of a particular LCA?⁵⁸

93. The United States considers that it would not be appropriate to adjust aircraft price data in an attempt to account for services. Boeing's [BCI].⁵⁹ To the limited extent that [BCI].⁶⁰ These are comparable in nature to [BCI], and seen by customers as part of the value of the purchased good.

42. With reference to, inter alia, paragraph 185 of the European Union's written submission, paragraph 34 of the Methodology Paper, and paragraph 138 of the United States' written submission, and bearing in mind that orders may change before delivery occurs, as is the case with orders that are cancelled, please answer the following questions:

- a. **How could the Arbitrator assess the likelihood that the orders referred to in Tables 10 and 12 of the Appellate Body's report in the compliance proceeding would be cancelled, if they had been won by the US LCA industry, either in whole or in part? Should the Arbitrator rely on Boeing and/or Airbus and/or customer data for such an assessment?**
- b. **Do Airbus/Boeing receive some amount of remuneration for LCA orders even when the orders are cancelled? How is that amount determined?**
- c. **Why did the compliance panel and Appellate Body find the orders contained in Tables 10 and 12 of the Appellate Body's report in the compliance proceeding to represent "significant ... lost sales" to the US LCA industry when such orders had not yet been delivered? In your answers, please take into account, *inter alia*, the content of section VII.F.6 of the original panel report in this dispute.**

43. With reference to, *inter alia*, paragraphs 163 and 368 of the European Union's written submission, and paragraphs 138 and 197–198 of the United States' written submission, how do the parties propose that the Arbitrator reconcile the fact that the relevant Transaero A380 order was cancelled, and thus no deliveries will ever be made pursuant to it, and the reports of the compliance panel and Appellate Body, both of which found the Transaero order to be "significant"? In your answers, please take into account the timing of the cancellation of this order, insofar as it is known to the parties.

94. The United States provides the following response to Question 42 (subparts (a)-(c)) and Question 43.

95. The Arbitrator should value the aircraft associated with the lost sales in Tables 10 and 12 without any assessment of the likelihood that orders would be cancelled. The DSB adopted findings that the orders contained in Tables 10 and 12 of the compliance appellate report

⁵⁸ See Panel Report, *EC and certain member States – Large Civil Aircraft*, para. 7.1725 and fn 5200 (referring to "maintenance" issues in contracts).

⁵⁹ Boeing E-mail regarding First Set of Arbitrator Questions (Exhibit USA-30(HSBI)).

⁶⁰ Boeing E-mail regarding First Set of Arbitrator Questions (Exhibit USA-30(HSBI)).

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represent significant lost sales within the meaning of SCM Agreement Article 6.3(c) in the December 2011 – 2013 period. The record that formed the basis of the DSB’s adverse effects findings did not include any evidence of cancellations with respect to the relevant orders, and neither the compliance panel report nor the compliance appellate report considered the likelihood of cancellation of these orders to be a relevant factor in the analysis of whether an order was a “lost sale” or whether a lost sale was “significant” within the meaning of Article 6.3(c).

96. The EU argues that the Arbitrator should ignore the Transaero order by assigning no value to the aircraft associated with it because Transaero cancelled the order after the compliance proceeding reference period. However, the cancellation of an order is a fact that would be considered among other facts in the determination of whether a particular order represents a significant lost sale. Additional facts in the case of a cancellation, including whether Boeing or Airbus received remuneration and how that amount is determined, may also be relevant in considering whether an order is a “lost sale” as a result of the subsidies, or whether a lost sale is “significant,” within the meaning of Article 6.3(c).

97. [BCI].⁶¹

98. These are all potential facts that could be considered as part of the determination of whether a complaining party has indeed established an instance of adverse effects in the form of significant lost sales. The compliance panel and appellate reports determined adverse effects on the factual record before it. That record included evidence presented by the United States that the existing LA/MSF subsidies caused Boeing to lose the relevant orders. There was no evidence on the record of a cancellation of any of these orders. The record also included the fact that the orders had not been delivered. As it has in all phases of both this dispute and *US – Large Civil Aircraft*, the DSB adopted findings that, in the context of this industry and other relevant factual circumstances, an order obtained by one manufacturer as a result of the existing subsidies, without more, is sufficient to establish an instance of adverse effects in the form of significant lost sales.

99. On the basis of the evidence before it, the DSB adopted findings that all of the orders in Tables 10 and 12, including the Transaero order, were instances of significant lost sales within the meaning of Article 6.3(c). In raising the cancellation of the Transaero order after the compliance proceeding reference period – a fact that was therefore not on the record and thus does not form part of the basis of the adverse effects determined to exist – the EU is attempting to re-litigate, based on a new factual record, whether Transaero’s order of four (4) A380s is a significant lost sale.

100. However, the purpose of an arbitration under Article 7.9 is to determine whether proposed countermeasures are commensurate with the adverse effects determined to exist, not to

⁶¹ Boeing E-mail regarding First Set of Arbitrator Questions (Exhibit USA-30(HSBI)).

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provide an appeal of those adverse effects determined to exist. Accordingly, any attempt to ignore the value of aircraft associated with the lost sales in Tables 10 and 12, including in an effort to “reconcile” the fact of the Transaero cancellation with the findings in both compliance reports that the Transaero sale was “significant,” would function as an improper collateral attack on the adverse effects determined to exist.

1.2.3 Impedance

For the European Union

44. With reference to paragraph 296 and footnote 319 of the European Union's written submission, could the European Union please explain whether the figure of 54 deliveries in the impedance context is correct or whether this figure is referring in error to the number of A380 aircraft that were ordered in connection with the orders that represented "lost sales"?

For the United States

45. With reference to paragraph 88 of the Methodology Paper and paragraphs 251 and 252 of the United States' written submission, could the United States please answer the following questions intended to clarify the rationale behind the US method for calculating a 2011 delivery price:

- a. What is the rationale for using the delivery/order price ratio to estimate the average delivery price in 2011? What does this delivery/order price ratio capture?**

101. As there were no deliveries of 747-8Is in 2011, there is no 2011 747-8I per-aircraft delivery price available for valuing impedance. In contrast, there were orders placed that year, so the United States has an actual global average per-aircraft order price for 747-8Is in 2011. However, a potential timing problem exists with prices for orders and prices for deliveries, such that the United States could not reasonably assume that the 2011 747-8I average order price is a good proxy for the 2011 747-8I average delivery price. Whereas the prices of an aircraft model ordered in a given year (e.g., 2011) reflect market conditions in that year, the prices of the same model delivered in the same year (e.g., 2011) were typically set by orders placed several years prior (e.g., 2006-2008), when market conditions could have been different, and then escalated to the year of delivery. Accordingly, it is possible that order prices for a model in a given year could differ substantially from delivery prices for the same model in the same year.

102. Given this potential timing problem, the United States considered that the ratio of order prices to delivery prices in 2012-2013 would reasonably approximate the ratio of order prices to delivery prices in 2011 and therefore enable the calculation of a 2011 747-8I global average per-aircraft delivery price. For 2012 and 2013, the delivery price (after making the adjustments

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discussed in the U.S. Written Submission) is [BCI] percent of the order price.⁶² This delivery/order price ratio was applied to the order price of 747-8Is in 2011 to calculate the missing delivery price for that year.⁶³ In this way, the applied delivery/order price ratio accounts for possible differences between order and delivery prices in 2011.

b. Why would the order price and delivery price be different, resulting in a ratio of [BCI]? Or is this a reflection of the difference in prices at the time of order and delivery due to the application of the escalation formula?

103. As discussed above in response to subpart (a) of this question, the order prices and delivery prices reflect different sales that occurred at different times. The order prices reflect prices for orders placed in 2012 or 2013, and the delivery prices reflect prices for orders delivered in 2012 or 2013 but placed in prior years. There are many reasons why order prices and delivery prices observed in a given year may differ. Because the orders corresponding to the deliveries made in a given year were placed in prior years, or by different customers, the economic context in which prices are set may differ for the orders and deliveries in a given year.

c. Why are the 2011 orders the best data to use here? By when were the two 747-8Is that were ordered in 2011 to be delivered? Would 2012 and 2013 (or potentially 2010) delivery prices be a better proxy for 2011 delivery price? If not, why not?

104. Despite the EU's statements to the contrary, this method of estimating delivery prices is not "unnecessarily complicated and arbitrary."⁶⁴ In fact, it is both simple and straightforward. The issue for calculating impedance for 2011 is that no deliveries of 747-8Is were made in 2011 and, therefore, no actual 2011 delivery price is available. However, delivery prices are available for 2012 and 2013. Furthermore, order prices are available for 2011, 2012, and 2013. The United States calculated the ratio of order price to delivery price in the years when both are available, and then applied this ratio to the observed order price in 2011 to estimate the delivery price in 2011. This is a simple, straightforward calculation that applies elementary arithmetic to empirical data.

105. The U.S. approach to calculating 2011 delivery price using the delivery/order price ratio is reasonable. The United States adopted this methodology based on three principal considerations. First, the 2011 average order price is the only reference price available for the year of interest, 2011. The United States determined that it was reasonable to calculate the missing data based on data available for the year in question.

⁶² See Revised Calculation of 2011 747-8I Delivery Prices (Exhibit USA-27(HSBI)).

⁶³ See Revised Calculation of 2011 747-8I Delivery Prices (Exhibit USA-27(HSBI)).

⁶⁴ EU Written Submission, para. 329.

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106. Second, the availability of both order and delivery price data for 2012 and 2013 made it possible to observe a relationship between 747-8I order and delivery prices in a period immediately after 2011. Deliveries made in 2012 and 2013 fulfil orders that were neither placed in 2011 nor for which deliveries were made in 2011 and, thus, their prices are not a better proxy for delivery prices in 2011.

107. Third, there were no deliveries made in 2010, so 2010 could not be used as a reference. In light of these considerations, there is no reason to believe that 2012 – 2013 delivery prices would be a better proxy for 2011 delivery prices than the U.S. ratio-based method. Both approaches seek to calculate a proxy value for 2011, but only one (the ratio-based method) uses any data from 2011.

108. Further, the two 747-8Is that were ordered in 2011 were scheduled for delivery in [BCI].⁶⁵ Regardless, the delivery prices for the 747-8Is *ordered* in 2011 would not be a good proxy for the *delivery* prices in 2011 for the reasons discussed above and should therefore not be used as a proxy for 2011 delivery prices.

d. What is the rationale for using forward values rather than past values to infer the 2011 delivery price?

109. If data on deliveries of 747-8Is prior to 2012 were available and relatively close in time to 2011, the United States could have used those data to estimate the 2011 delivery price. However, the first deliveries of 747-8Is were made in 2012, so the United States used the best data that were available to estimate values for impedance in December 2011.

For both parties

46. With reference to paragraph 208 and sections IX.B.1.b and IX.B.2.a.ii of the European Union's written submission, and paragraph 231 and section V.B.2.a.ii of the United States' written submission, could the parties please explain the significance to their respective arguments, if any, of the issues surrounding 747-8 production discussed in paragraph 6.1816 and footnote 3326 of the report of the compliance panel and paragraph 5.735 of the report of the Appellate Body in the compliance proceeding?

110. The United States explained in response to Question 7(a) why, procedurally, the EU errs in urging consideration of an alleged non-attribution factor (*i.e.*, capacity constraints) as part of a re-assessment of the adopted compliance findings. The discussions in paragraph 6.1816 and footnote 3326 of the compliance panel report and paragraph 5.735 of the compliance appellate report confirm that the reasoning in the adopted reports forecloses the EU's non-attribution argument here on the merits.

⁶⁵ Boeing E-mail regarding First Set of Arbitrator Questions (Exhibit USA-30(HSBI)).

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111. In the compliance proceeding, the EU argued that it was not the subsidies, but rather production delays – the equivalent of a temporary capacity constraint⁶⁶ – that caused the Boeing 747-8I to lose sales. The compliance panel rejected this argument. In paragraph 6.1816, it emphasized that it did “not see the delays in the development and production of the 787 and the 747-8I to mean that, in the absence of the ‘product’ effects of the LA/MSF subsidies, Boeing or the United States’ LCA industry would not have won the orders corresponding to the deliveries made in the different markets for twin-aisle and very large LCA.”⁶⁷

112. The compliance panel further noted that, based on the adopted causation theory – that the A380 would not be present in the market absent the subsidies – customers that could not wait for the 747-8I to become available would have turned to other U.S. LCA.⁶⁸ In footnote 3226, the compliance panel recalled evidence that “larger versions of the 777 may also at times challenge for sales in the market for very large LCA.” (Notably, the DSB found that the A350 XWB, the largest Airbus model family aside from the A380, would also have been unavailable during the December 2011 – 2013 period.)

113. Paragraph 5.735 of the appellate report then reviewed the compliance panel’s findings that, absent the subsidies, even if the 747-8I were unavailable and customers could not wait, they still would have ordered other U.S. LCA, and that larger versions of the 777 may at times challenge for VLA sales. It then concluded that: “we see no reason to disturb the Panel’s finding that this non-attribution factor would not be capable of diluting the genuine and substantial relationship of cause and effect between LA/MSF subsidies and the alleged market phenomena.”⁶⁹

114. Thus, there is no question that both compliance reports rejected the EU’s non-attribution argument, and that the same reasoning forecloses the EU’s capacity constraint non-attribution argument in this arbitration. As the United States explained in its written submission, the proper approach is to value all of the A380 lost sales as if the 747-8I would have been sold and delivered instead.⁷⁰ However, even assuming *arguendo* that this approach would have to be – but could not be – reconciled with the actual first delivery timing of the 747-8, the only potential adjustment would be to substitute the value of the largest 777 for the 747-8 value for the aircraft delivered prior to the initial 747-8I delivery in 2012.

⁶⁶ As explained in response to Question 7(a), a production delay in this context means that, for the pendency of the delay, the production capacity of the relevant aircraft is zero. Thus, this is essentially arguing that the constraints on the manufacturer’s ability to produce the aircraft – and not the subsidies – are the principal cause of the lost sales.

⁶⁷ Compliance Panel Report, para. 6.1816.

⁶⁸ See Compliance Panel Report, para. 6.1816.

⁶⁹ Compliance Appellate Report, para. 5.735.

⁷⁰ See U.S. Written Submission, paras. 191-196, 238-243.

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1.2.4 Formula for adjusting countermeasures

For the European Union

47. With reference to paragraph 352 of the European Union's written submission, could the European Union please explain in relation to the calculation of the single inflator what weights should be allocated to the CPI and the PPI for LCA manufacturers and how the level of the cap of annual inflation should be determined?

1.2.5 Share of production value that is produced outside of the United States

For the European Union

48. With reference to paragraph 362 of the European Union's written submission, could the European Union please explain in detail how and at what stage in the methodology proposed by the European Union the degree of adverse effects should be reduced by the share of production value that is produced abroad?

49. With reference to paragraphs 262–265 of the United States' written submission concerning inputs made outside the United States, could the European Union please respond to the arguments contained therein?

1.3 PRELIMINARY RULING REQUEST

For the European Union

50. With reference to paragraphs 46 and 52–53 of the United States' written submission regarding whether the Arbitrator should halt its work, could the European Union please respond to the arguments contained therein?

1.4 QUESTIONS CONCERNING ARTICLE 7.10 OF THE SCM AGREEMENT

For both parties

51. With reference to paragraph 18 of the United States' written submission citing the arbitrator in *US – Upland Cotton* (Article 22.6 II) that the term "'commensurate' connotes a less precise degree of equivalence than exact numerical correspondence", could the parties please provide their views as to how the Arbitrator should take this into account in:

- a. choosing a methodology for calculating the countermeasures; and**
- b. determining the level of countermeasures?**

115. The United States provides the following response to subparts (a) and (b) of Question 51.

116. The arbitrator in *US – Upland Cotton* (22.6 II) made this observation with regard to the relationship between “the proposed countermeasures and the ‘degree and nature of the adverse

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effects determined to exist’.”⁷¹ The reasoning has several implications for the analysis in this proceeding.

117. First, the level of the proposed countermeasures need not reflect exactly the value of the adverse effects determined to exist. For example, the level of countermeasures may reflect rounding to a convenient figure. As long as the lesser degree of precision was reasonable, the level of countermeasures would remain “commensurate” with the adverse effects determined to exist, consistent with Articles 7.9 and 7.10 of the SCM Agreement.

118. Second, because the countermeasures need not have exact numerical correspondence to the adverse effects determined to exist, the methodology for valuing those effects need not achieve pinpoint precision. That is, if the party requesting authorization to impose countermeasures adopts a reasonable methodology to calculate the numerical value of the adverse effects determined to exist, it is insufficient for the challenging party to merely identify alternative approaches that would provide more precise results. This is the case because even if the countermeasures are set equal to a calculated value that may deviate from the results of a more precise calculation, they would still be “commensurate” with the adverse effects determined to exist.

119. This possibility will have particular relevance in evaluating proposals to increase the precision of the calculation by adopting an alternative methodology that is complex or requires burdensome gathering of information that is not readily available. In evaluating a methodology for valuing the adverse effects determined to exist, the key consideration is whether it does so with a reasonable degree of precision, not whether it achieves mathematical exactitude.

⁷¹ *US – Upland Cotton (22.6 II)*, para. 4.39.