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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***

DECISION BY THE ARBITRATOR

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WTO CASES CITED IN THIS DECISION

Short Title	Full Case Title and Citation
<i>Brazil – Aircraft</i> (Article 22.6 – Brazil)	Decision by the Arbitrators, <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, DSR 2002:I, 19
<i>Canada – Aircraft Credits and Guarantees</i> (Article 22.6 – Canada)	Decision by the Arbitrator, <i>Canada – Export Credits and Loan Guarantees for Regional Aircraft – Recourse to Arbitration by Canada under Article 22.6 of the DSU and Article 4.11 of the SCM Agreement</i> , WT/DS222/ARB, 17 February 2003, DSR 2003:III, 1187
<i>EC – Bananas III (Ecuador)</i> (Article 22.6 – EC)	Decision by the Arbitrators, <i>European Communities – Regime for the Importation, Sale and Distribution of Bananas – Recourse to Arbitration by the European Communities under Article 22.6 of the DSU</i> , WT/DS27/ARB/ECU, 24 March 2000, DSR 2000:V, 2237
<i>EC – Bananas III (US)</i> (Article 22.6 – EC)	Decision by the Arbitrators, <i>European Communities – Regime for the Importation, Sale and Distribution of Bananas – Recourse to Arbitration by the European Communities under Article 22.6 of the DSU</i> , WT/DS27/ARB, 9 April 1999, DSR 1999:II, 725
<i>Guatemala – Cement I</i>	Appellate Body Report, <i>Guatemala – Anti-Dumping Investigation Regarding Portland Cement from Mexico</i> , WT/DS60/AB/R, adopted 25 November 1998, DSR 1998:IX, 3767
<i>Guatemala – Cement I</i>	Panel Report, <i>Guatemala – Anti-Dumping Investigation Regarding Portland Cement from Mexico</i> , WT/DS60/R, adopted 25 November 1998, as modified by Appellate Body Report WT/DS60/AB/R, DSR 1998:IX, 3797
<i>US – Continued Suspension</i>	Appellate Body Report, <i>United States – Continued Suspension of Obligations in the EC – Hormones Dispute</i> , WT/DS320/AB/R, adopted 14 November 2008
<i>US – Continued Suspension</i>	Panel Report, <i>United States – Continued Suspension of Obligations in the EC – Hormones Dispute</i> , WT/DS320/R, adopted 14 November 2008, as modified by Appellate Body Report WT/DS320/AB/R
<i>US – FSC</i> (Article 22.6 – US)	Decision by the Arbitrator, <i>United States – Tax Treatment for "Foreign Sales Corporations" – Recourse to Arbitration by the United States under Article 22.6 of the DSU and Article 4.11 of the SCM Agreement</i> , WT/DS108/ARB, 30 August 2002, DSR 2002:VI, 2517
<i>US – Gambling</i> (Article 22.6 – US)	Decision by the Arbitrator, <i>United States – Measures Affecting the Cross-Border Supply of Gambling and Betting Services – Recourse to Arbitration by the United States under Article 22.6 of the DSU</i> , WT/DS285/ARB, 21 December 2007, DSR 2007:X, 4163
<i>US – Upland Cotton</i>	Appellate Body Report, <i>United States – Subsidies on Upland Cotton</i> , WT/DS267/AB/R, adopted 21 March 2005, DSR 2005:I, 3
<i>US – Upland Cotton</i>	Panel Report, <i>United States – Subsidies on Upland Cotton</i> , WT/DS267/R, Corr.1, and Add.1 to Add.3, adopted 21 March 2005, as modified by Appellate Body Report WT/DS267/AB/R, DSR 2005:II, 299
<i>US – Upland Cotton</i> (Article 21.5 – Brazil)	Appellate Body Report, <i>United States – Subsidies on Upland Cotton – Recourse to Article 21.5 of the DSU by Brazil</i> , WT/DS267/AB/RW, adopted 20 June 2008
<i>US – Upland Cotton</i> (Article 21.5 – Brazil)	Panel Report, <i>United States – Subsidies on Upland Cotton – Recourse to Article 21.5 of the DSU by Brazil</i> , WT/DS267/RW and Corr.1, adopted 20 June 2008, as modified by Appellate Body Report WT/DS267/AB/RW

LIST OF ABBREVIATIONS

2002 Farm Bill	Farm Security and Rural Investment Act of 2002
<i>Anti-Dumping Agreement</i>	Agreement on Implementation of Article VI of the General Agreement on Tariffs and Trade 1994
ATPSM	Agricultural Trade Policy Simulation Model
CCC	Commodity Credit Corporation
CCPs	Counter-cyclical payments
CY	Calendar year
DSB	Dispute Settlement Body
DSU	Dispute Settlement Understanding
ECGs	Export credit guarantees
FAPRI	Food and Agricultural Policy Research Institute
FAS	Foreign Agricultural Service
FSRI	Farm Security and Rural Investment
FY	Fiscal year
GATS	General Agreement on Trade in Services
GATT 1994	General Agreement on Tariffs and Trade 1994
GSM	General Sales Manager
ILC	International Law Commission
ML	Marketing loans
MY	Marketing year
ROW	Rest of the World
RMSE	Root measure square error
<i>SCM Agreement</i>	Agreement on Subsidies and Countervailing Measures
SCGP	Supplier Credit Guarantee Program
Step 2	User Marketing Step 2
TRIPS	Trade-Related Aspects of Intellectual Property Rights
USDA	United States Department of Agriculture
US	United States
Vienna Convention	Vienna Convention on the Law of Treaties

I. INTRODUCTION

A. INITIAL PROCEEDINGS

1.1 On 21 March 2005, the Dispute Settlement Body ("DSB") adopted the Appellate Body report¹ and the report of the Panel in this case², as modified by the Appellate Body.

1.2 The Appellate Body upheld the conclusions of the panel that the Step 2 payments made to domestic users and those made to exporters were subsidies within the meaning of Article 3.1(b) of the *SCM Agreement* (in the case of the former) and Article 3.1(a) of the same Agreement (in the case of the latter), and were prohibited by those provisions respectively and granted and maintained inconsistently with Article 3 of that Agreement. The Appellate Body also upheld the Panel's findings that the export credit guarantee programmes at issue, i.e. GSM 102, GSM 103 and SCGP, constituted *per se* export subsidies within the meaning of Item (j) of the Illustrative List of Export Subsidies in Annex I of the *SCM Agreement* and therefore were subsidies inconsistent with Article 3.1(a) and 3.2 of the *SCM Agreement*. The Appellate Body also upheld the Panel's conclusion that the effect of marketing loan programme payments, Step 2 payments, market loss assistance payments and counter-cyclical payments (the "price-contingent subsidies") was significant price suppression in the same world market within the meaning of Article 6.3 (c) of the *SCM Agreement*.³

1.3 As recommended by the original panel under Article 4.7 of the *SCM Agreement*, the compliance period for the prohibited subsidies expired on 1 July 2005. In accordance with Article 7.9 of the *SCM Agreement*, the compliance period for the actionable subsidies expired on 21 September 2005, six months after the date on which the DSB adopted the Appellate Body report.⁴

1.4 On 30 June 2005, the United States Department of Agriculture (the "USDA") announced that the United States Commodity Credit Corporation (the "CCC") would no longer accept applications for export credit guarantees under the GSM 103 programme.⁵ The USDA also announced that the CCC would use a new fee structure for the GSM 102 and SCGP programmes.⁶

1.5 In October 2005, the CCC ceased issuing export credit guarantees under the SCGP.⁷

1.6 On 1 February 2006, United States Congress adopted legislation repealing the Step 2 payments programme for upland cotton effective as of 1 August 2006.⁸

¹ Appellate Body Report, *United States – Subsidies on Upland Cotton*, WT/DS267/AB/R (hereafter the "Appellate Body Report").

² Panel Report, *United States – Subsidies on Upland Cotton*, WT/DS267/R (hereafter the "Panel Report").

³ See Appellate Body Report, para. 763 (c), (d) and (e).

⁴ See WT/DS267/21, WT/DS267/26.

⁵ See Panel Report, para. 3.16 (referring to "USDA announces changes to export credit guarantee programs to comply with WTO findings", USDA Foreign Agricultural Service (FAS) Online News Release of 30 June 2005 (Exhibit Bra-502 submitted by Brazil to the Panel); and "Notice to GSM-103 Program Participants", USDA FAS Program Announcement of 30 June 2005 (Exhibit Bra-503 submitted by Brazil to the Panel)).

⁶ See Panel Report, para. 3.16.

⁷ See *ibid.* (referring to United States' first written submission to the Panel, para. 20, and "Summary of FY 2006 Export Credit Guarantee Programme Activity for GSM-102 as of close of business: 9/30/2006" (Exhibit Bra-513 submitted by Brazil to the Panel)).

⁸ See Panel Report, para. 3.7 (referring to Section 1103 of the Deficit Reduction Act of 2005, Public Law No. 109-171 (Exhibit Bra-435 submitted by Brazil to the Panel)).

1.7 On 18 August 2006, Brazil requested the establishment of a panel pursuant to Article 21.5 of the Dispute Settlement Understanding ("DSU") concerning the alleged failure of the United States to implement the recommendations and rulings of the DSB.⁹ At its meeting of 28 September 2006 the DSB decided, in accordance with Article 21.5 of the DSU, to refer this matter, if possible, to the original Panel. The compliance panel report was circulated to Members on 18 December 2007.

1.8 With respect to the marketing loan and counter-cyclical payments, the compliance panel found that the United States failed to comply with the DSB recommendations by acting inconsistently with Articles 5(c) and 6.3(c) of the *SCM Agreement*:

"The United States acts inconsistently with its obligations under Articles 5(c) and 6.3(c) of the *SCM Agreement* in that the effect of marketing loan and counter-cyclical payments provided to US upland cotton producers pursuant to the FSRI Act of 2002 is significant price suppression within the meaning of Article 6.3(c) of the *SCM Agreement* in the world market for upland cotton constituting 'present' serious prejudice to the interests of Brazil within the meaning of Article 5(c) of the *SCM Agreement*. By acting inconsistently with Articles 5(c) and 6.3(c) of the *SCM Agreement* the United States has failed to comply with the DSB recommendations and rulings. Specifically, the United States has failed to comply with its obligation under Article 7.8 of the *SCM Agreement* 'to take appropriate steps to remove the adverse effects or ... withdraw the subsidy'.¹⁰

1.9 The compliance panel concluded that "to the extent that the measures taken by the United States to comply with the recommendations and rulings adopted by the DSB in the original proceeding are inconsistent with the obligations of the United States under the covered agreements, these recommendations and rulings remain operative."¹¹

1.10 On 12 February 2008, the United States notified the DSB of its intention to appeal certain issues of law covered in the Report of the compliance panel and certain legal interpretations developed by the panel and filed a Notice of Appeal.¹² On 25 February 2008, Brazil notified the DSB, pursuant to Article 16.4 of the DSU, of its intention to appeal certain issues of law covered in the Report of the compliance panel and certain legal interpretations developed by the Panel and filed a Notice of Other Appeal.¹³

1.11 The Appellate Body report was circulated on 2 June 2008. The Appellate Body upheld the compliance panel's conclusions with respect to the marketing loan and counter-cyclical payments as well as the conclusions on the GSM 102 export credit guarantees issued under the revised GSM 102 programme.¹⁴

1.12 The DSB adopted the Appellate Body report and the compliance panel report as modified by the Appellate Body on 20 June 2008.

⁹ WT/DS267/30.

¹⁰ Panel Report, *US – Upland Cotton (Article 21.5 – Brazil)*, para. 15.1(a).

¹¹ Panel Report, *US – Upland Cotton (Article 21.5 – Brazil)*, para. 15.2.

¹² WT/DS267/33.

¹³ WT/DS267/34.

¹⁴ Although the Appellate Body found that the compliance panel failed to make an objective assessment of the revised GSM 102 programme pursuant to item (j) of the Illustrative List by not considering certain re-estimated data submitted by the United States, it also found that this did not affect the compliance panel's conclusion on the revised GSM 102 programme payments.

B. REQUEST FOR ARBITRATION AND ARBITRATION PROCEEDINGS

1.13 On 4 July 2005, Brazil notified the DSB of its "Recourse to Article 4.10 of the *SCM Agreement* and Article 22.2 of the DSU" with respect to the prohibited subsidies found to be inconsistent by the original Panel and the Appellate Body.¹⁵ These prohibited subsidies were identified as follows: (i) the export credit guarantees under the GSM 102, GSM 103 and SCGP export credit guarantee programmes in respect of exports of upland cotton and other unscheduled agricultural products supported under the programmes, and in respect of one scheduled product (rice); (ii) Section 1207(a) of the Farm Security and Rural Investment (FSRI) Act of 2002 providing for user marketing (Step 2) payments to exporters of upland cotton; and (iii) Section 1207(a) of the FSRI Act of 2002 providing for user marketing (Step 2) payments to domestic users of upland cotton. Brazil requested an authorization to take appropriate countermeasures in the amount corresponding: (i) to the Step 2 payments made in the most recent concluded marketing year; and (ii) to the total amount of exporter applications received under GSM 102, GSM 103, and SCGP for the most recent concluded fiscal year. Brazil also requested cross-sector suspension of obligations under the TRIPS Agreement and the GATS pursuant to Article 22.3(c) of the DSU.

1.14 On 5 July 2005, Brazil and the United States notified "Agreed Procedures under Articles 21 and 22 of the Dispute Settlement Understanding and Article 4 of the *SCM Agreement* in the follow-up to the dispute" ("Agreed Procedures") to the DSB.¹⁶

1.15 On 14 July 2005, the United States notified the DSB of its objection "to the appropriateness of the countermeasures and the level of suspension of concessions or other obligations proposed by Brazil". The United States also claimed that the principles and procedures set forth in Article 22.3(c) of the DSU for requesting cross-sector suspension of concessions and obligations had not been followed by Brazil.¹⁷

1.16 On 15 July 2005, at the meeting of the DSB, it was agreed that the matter raised by the United States in WT/DS267/23 was referred to arbitration as required by Article 22.6 of the DSU and Article 4.11 of the *SCM Agreement*. The Arbitrator was constituted on 19 July 2005. It was composed of the members of the original Panel, namely Mr Darius Rosati as Chairman, and Mr Mario Matus and Mr Daniel Moulis as Members.¹⁸

1.17 On 17 August 2005, the United States and Brazil jointly requested suspension of the arbitration proceedings according to their "Agreed Procedures" until Brazil might subsequently request the resumption or termination of the Arbitration. The Arbitrator suspended the arbitration proceedings on 18 August 2005.¹⁹

1.18 On 6 October 2005, Brazil notified to the DSB its "Recourse to Article 7.9 of the *SCM Agreement* and Article 22.2 of the DSU by Brazil" with respect to the actionable subsidies found to be inconsistent by the original panel and the Appellate Body. The subsidies in question were identified as marketing loan programme payments, user marketing (Step 2) payments, market loss assistance payments and counter-cyclical payments. Brazil requested the DSB to grant Brazil authorization to take countermeasures in the annual amount of US\$1.037 billion until the United States withdrew the relevant subsidies or removed their adverse effects. Brazil also requested

¹⁵ WT/DS267/21.

¹⁶ See WT/DS267/22.

¹⁷ See WT/DS267/23.

¹⁸ See WT/DS267/24.

¹⁹ WT/DS267/25.

cross-sector suspension of obligations under the TRIPS Agreement and the GATS pursuant to Article 22.3(c) of the DSU.²⁰

1.19 On 17 October 2005, the United States notified to the DSB its objection to the level of suspension of concessions or other obligations and the countermeasures proposed by Brazil. The United States contended that the countermeasures proposed were not commensurate with the degree and nature of the adverse effects determined to exist within the meaning of Article 7.9 of the *SCM Agreement*. Further, the United States contended that the level of suspension proposed was not equivalent to the level of nullification or impairment within the meaning of Article 22.7 of the DSU. The United States also claimed that the principles and procedures set forth in Article 22.3(c) of the DSU had not been followed by Brazil in requesting cross-sector suspension of concessions and obligations.²¹

1.20 On 18 October 2005, at the meeting of the DSB, it was agreed that the matter raised by the United States was referred to arbitration. On 18 November 2005, the Arbitrator was constituted. It was composed of the members of the original Panel, namely Mr Darius Rosati as Chairman, and Mr Mario Matus and Mr Daniel Moulis as Members.²²

1.21 On 21 November 2005, Brazil and the United States jointly notified the Arbitrator of their request that the arbitration proceedings be suspended until either party were to subsequently request their resumption. The Arbitrator suspended the arbitration proceedings on 7 December 2005.²³

1.22 On 25 August 2008, Brazil notified a request of resumption of these arbitration proceedings (in relation to actionable subsidies) and also the resumption of the other arbitration proceedings (in relation to prohibited subsidies).²⁴

1.23 On 1 October 2008, due to the unavailability of two members of the Arbitrator upon resumption of the proceedings, the parties agreed on the following composition of the Arbitrator for both proceedings:

Mr Eduardo Pérez-Motta, as Chairman
Mr Alan Matthews
Mr Daniel Moulis²⁵

1.24 An organizational meeting was held on 24 October 2008 to discuss the proposed working procedures and timetables for both arbitration proceedings. The final working procedures and timetables were sent to the parties on 29 October 2008. Brazil requested a further extension of the deadline for its written submission on 31 October 2008. The Arbitrator, after considering the arguments of both parties in relation to Brazil's request, revised the timetables and sent them to the parties on 19 November 2008.

1.25 On 31 October 2008, Brazil submitted its Methodology Paper for the calculation of the proposed countermeasures. The United States provided a written submission on 9 December 2008. Brazil provided its written submission on 13 January 2009. The Arbitrator sent written questions to the parties on 30 January 2009. The parties provided their replies to these questions on 13 February 2009.

²⁰ See WT/DS267/26.

²¹ See WT/DS267/27.

²² See WT/DS267/28.

²³ See WT/DS267/29.

²⁴ See WT/DS267/38, WT/DS267/39.

²⁵ See WT/DS267/24/Add.1, WT/DS267/28/Add.1.

1.26 The Arbitrator met with the parties on 3 March 2009. After the meeting, the Arbitrator posed additional written questions to the parties on 6 March 2009 and received their written responses on 20 March 2009. The parties also provided their comments on each other's written responses to questions from the Arbitrator on 31 March 2009. On 20 April 2009, the Arbitrator informed the parties that in light of the voluminous materials received from parties after the meeting with parties, and also taking into account the time needed for translation of the reports into the other two working languages, the issuance date of the Arbitrator's Decision was delayed. The Arbitrator asked the parties an additional question on 11 June 2009. On 30 June and 5 August 2009, the Arbitrator informed the parties of further delays in the circulation of the Decision. The Decision by the Arbitrator was circulated on 31 August 2009.

C. ORGANIZATION OF THE PROCEEDINGS AND PRESENTATION OF THE DECISION

1.27 As described above, two separate arbitration proceedings were initiated pursuant to Article 22.6 of the DSU in this dispute, one in relation to the prohibited subsidies at issue in the underlying proceedings, and the other in relation to the actionable subsidies. These proceedings were conducted in parallel and the same persons served as arbitrators in both proceedings. The parties presented single submissions in relation to both proceedings.

1.28 The Arbitrator therefore sought the views of the parties whether it should issue a single decision or two decisions for both proceedings and how it should treat the arguments presented in the parties' single submissions.

1.29 The United States indicates that there are two arbitration requests and two arbitrations, and that it therefore expects the Arbitrator to issue a separate decision for each of the two arbitrations. With respect to the use of submissions, the United States indicates that the sections of the submissions that are not clearly related to prohibited subsidies or to actionable subsidies may be relevant to either proceeding.²⁶ Brazil on the other hand argues that the two proceedings should be harmonized as much as possible and considers that a single decision would be sufficient for the two arbitrations. Also, Brazil has no objection to the Arbitrator taking into account arguments made in the entirety of Brazil's submissions for the purpose of rendering decisions in either proceeding.²⁷

1.30 With respect to the treatment of the parties' submissions, the Arbitrator notes that although each party submitted a single written submission, the sections on prohibited subsidies are separate from the sections on actionable subsidies. It is therefore generally possible to distinguish the arguments relating to the proposed countermeasures against the prohibited subsidies at issue, from those relating to countermeasures against the actionable subsidies. In addition, some sections of the submissions, such as the introduction and the sections on cross-retaliation, may be relevant to both proceedings. The Arbitrator will therefore refer to such arguments in this Decision as appropriate.

1.31 With respect to the presentation of its Decision, the Arbitrator notes that the United States presented two distinct objections to the two distinct requests for countermeasures presented by Brazil. Although the conduct of the two proceedings was harmonized and the parties both provided a single written submission covering both the prohibited and actionable subsidies at issue, the fact remains that there are two arbitration proceedings, and that the proceedings against prohibited subsidies are based on Article 4.10 of the *SCM Agreement* whereas the proceedings relating to the actionable subsidies in the same dispute are based on Article 7.9 of the *SCM Agreement*. Under these circumstances, and in the absence of an agreement of the parties on the issuance of a single decision, the Arbitrator considered it appropriate to issue a separate decision with respect to each of the two proceedings.

²⁶ US responses to questions from Arbitrator, question 2.

²⁷ Brazil's responses to questions from the Arbitrator, question 2.

II. OVERALL APPROACH OF THE ARBITRATOR

2.1 The United States has initiated these proceedings pursuant to Article 22.6 of the DSU and Article 7.10 of the *SCM Agreement*.

2.2 Article 22.6 of the DSU provides in relevant part:

"When the situation described in paragraph 2 occurs, the DSB, upon request, shall grant authorization to suspend concessions or other obligations within 30 days of the expiry of the reasonable period of time unless the DSB decides by consensus to reject the request. However, if the Member concerned objects to the level of suspension proposed, or claims that the principles and procedures set forth in paragraph 3 have not been followed where a complaining party requested authorization to suspend concessions or other obligations pursuant to paragraph 3(b) or (c), the matter shall be referred to arbitration. Such arbitration shall be carried out by the original panel, if members are available, or by an arbitrator appointed by the Director-General and shall be completed within 60 days after the date of expiry of the reasonable period of time."

2.3 With regard to countermeasures taken in response to actionable subsidies under Part III of the *SCM Agreement*, however, Article 7.10 of that Agreement provides the following mandate for the arbitrator:

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

2.4 In this proceeding, the United States challenges two distinct aspects of Brazil's proposed countermeasures. The United States objects first to the *level* of suspension of concessions or other obligations and the countermeasures proposed by Brazil. In addition, the United States claims that the principles and procedures set forth in DSU Article 22.3 have not been followed by Brazil and therefore the United States requests the Arbitrator to reject Brazil's request to suspend concessions with respect to TRIPS and GATS.²⁸ We will therefore consider these two aspects in turn. In light of the fact that our determination in relation to the level of the proposed countermeasures may have an impact on our determination in relation to the form of countermeasures to be taken, we consider first the level of the proposed countermeasures.

2.5 As a preliminary matter, however, we must consider whether changes that have taken place in the legal basis for the granting of ML and CCPs affect Brazil's entitlement to seek countermeasures in relation to these payments.

III. PRELIMINARY ISSUE: DO CHANGES IN THE LEGAL BASIS OF THE MARKETING LOAN AND COUNTERCYCLICAL PAYMENTS AFFECT BRAZIL'S ENTITLEMENT TO TAKE COUNTERMEASURES?

3.1 The United States argues that ML and CCP subsidies under the Farm Security and Rural Investment Act of 2002 ("2002 Farm Bill") will no longer be made, so that there is no longer a legal basis for authorizing countermeasures, since the measures have been withdrawn with the expiry of the

²⁸ WT/DS267/23.

2002 Farm Bill.²⁹ We must therefore consider, as a preliminary matter, whether this circumstance affects Brazil's entitlement to seek countermeasures in relation to these payments.

A. ARGUMENTS OF THE PARTIES

3.2 The United States argues that the marketing loan and counter-cyclical payments challenged by Brazil during both the original and compliance panel proceedings were payments authorized by the 2002 Farm Bill. Given that the 2002 Farm Bill has expired, the United States argues that the subsidy has been withdrawn and that, as a result, there is no longer a basis to authorize countermeasures with respect to these payments. In addition, the United States considers that the condition under Article 22.8 of the DSU that the suspension shall only be applied until the removal of the inconsistent measure has been met, and therefore no countermeasure can be authorized now.³⁰

3.3 Brazil considers that there is no factual basis for the United States to claim that the ML and CCP subsidies have "expired". In Brazil's view, nothing in the 2008 Farm Bill that repealed the 2002 Farm Bill materially changed either the ML programme or the CCP programme as it applies to cotton. Brazil observes that the United States makes no assertions that the *substance* of ML and CCP subsidies has been changed in the 2008 Farm Bill. Nor could it, in Brazil's view, as demonstrated by USDA's "Side-By-Side" comparison of the provisions of the 2002 and 2008 Farm Bills.³¹

3.4 Brazil indicates that USDA states that the 2008 Farm Bill "[c]ontinues nonrecourse commodity loans with marketing loan provisions for 2008-12 crops", including cotton, and "[r]etains eligibility provisions" that existed in the 2002 Farm Bill. Brazil claims that Section 1202(a)(6) of the 2008 Farm Bill continues the same loan rate of US\$0.52 cents per pound that was applicable under the 2002 Farm Bill. Similarly, with respect to the counter-cyclical payment program, Brazil cites the relevant excerpt from USDA's "Side-By-Side" as confirming the unchanged continuation of that programme in the 2008 Farm Bill.³²

3.5 Brazil argues that despite the technical change in the legal basis for ML and CCP subsidies, the United States continues to provide them "under the same conditions and criteria as the marketing loan payments and counter-cyclical payments" subject to the original and compliance panels' findings of present serious prejudice. That is, the United States cannot escape its implementation obligation simply through the technical change of replacing one measure – ML and CCP subsidies under the 2002 Farm Bill – by another measure – ML and CCP subsidies under the 2008 Farm Bill.

3.6 Citing the Appellate Body's statement in *US – Continued Suspension*, Brazil argues that unless and until the United States has achieved "substantive compliance" with the recommendations and rulings by eliminating or withdrawing all of the adverse effects – including the threat of continuing future adverse effects – Brazil has the right to pursue countermeasures commensurate with the degree and nature of the adverse effects determined to exist.

3.7 In response to a question from the Arbitrator, the United States argues that Brazil uses a comparison of the provisions of the 2002 and 2008 Farm Bills to show that the change "did not reduce, or otherwise impact in any significant way" marketing loan or countercyclical payments for cotton. But, in the United States' view, the 2008 Farm Bill has only recently been put into effect, and that it is difficult to make any such conclusion on the basis of actual data. Therefore the United States claims that Brazil's conclusion is only speculation that reflects Brazil's assumptions regarding how the marketing loan and countercyclical payments will be made in the future. The United States says that,

²⁹ US written submission, paras. 235 and 236.

³⁰ US written submission, paras. 235-238.

³¹ See Brazil's written submission, para. 438.

³² Brazil's written submission, para. 439.

over time, the marketing loan and countercyclical payments will be affected by many factors other than the Farm Bill, including farmers' decisions in the United States and worldwide, the state of industries that use cotton as an input, etc. In addition, the United States claims that even if future payments were certain, the effects of those payments on price would still be a matter of speculation.³³

B. ASSESSMENT BY THE ARBITRATOR

3.8 The Arbitrator takes note of the parties' agreement that the 2002 Farm Bill has expired and that the 2008 Farm Bill has been enacted as of 3 January 2008.³⁴ The issue before the Arbitrator is that the United States claims that the 2002 Farm Bill under which ML and CCPs have been made has expired and these subsidies have been withdrawn, and that, therefore, there is no longer a basis to authorize countermeasures with respect to these payments.

3.9 We first note that, as a result of the original proceedings, the DSB recommended that the United States withdraw the ML and CCPs or remove their adverse effects. The compliance panel then found that the United States had failed to comply with the DSB recommendations with respect to these measures by acting inconsistently with Articles 5(c) and 6.3(c) of the *SCM Agreement*:

"The United States acts inconsistently with its obligations under Articles 5(c) and 6.3(c) of the *SCM Agreement* in that the effect of marketing loan and countercyclical payments provided to US upland cotton producers pursuant to the Farm Bill of 2002 is significant price suppression within the meaning of Article 6.3(c) of the *SCM Agreement* in the world market for upland cotton constituting 'present' serious prejudice to the interests of Brazil within the meaning of Article 5(c) of the *SCM Agreement*. By acting inconsistently with Articles 5(c) and 6.3(c) of the *SCM Agreement* the United States has failed to comply with the DSB recommendations and rulings. Specifically, the United States has failed to comply with its obligation under Article 7.8 of the *SCM Agreement* 'to take appropriate steps to remove the adverse effects or ... withdraw the subsidy'."³⁵

3.10 These conclusions were upheld by the Appellate Body, and the reports of the compliance panel and of the Appellate Body were adopted on 20 June 2008.

3.11 A multilateral determination has therefore been made, in the context of compliance proceedings initiated under Article 21.5 of the DSU, that the United States has failed to comply with the recommendations and rulings of the DSB with respect to the ML and CCPs. As we understand it, the United States is in essence requesting us to find that this determination is no longer pertinent, because the legal basis upon which the payments at issue were made at the time of the ruling no longer exists.

3.12 As an Arbitrator acting under Article 22.6 of the DSU and Article 7.10 of the DSU, our task is to review, under the applicable legal standard, the countermeasures proposed by Brazil in relation to the ML and CCPs, following the determination of non-compliance that has been made in relation to them. As the Appellate Body noted in *US – Continued Suspension*, "the authorization to suspend concessions is ... granted following a long process of multilateral dispute settlement in which relevant adjudicative bodies, as well as the DSB, render multilateral decisions at key stages of the process"³⁶, which may include compliance proceedings, followed by an arbitration to determine the level of suspension of concessions.

³³ US responses to questions from the Arbitrator, question 64, para. 164.

³⁴ Exhibit Bra-735.

³⁵ WT/DS267/RW, para. 15.1(a).

³⁶ Appellate Body Report, *US – Continued Suspension*, para. 317.

3.13 In this case, the compliance panel determined that "the effect of marketing loan and counter-cyclical payments provided to US upland cotton producers pursuant to the FSRI Act of 2002 is significant price suppression within the meaning of Article 6.3(c) of the *SCM Agreement* in the world market for upland cotton constituting 'present' serious prejudice to the interests of Brazil within the meaning of Article 5(c) of the *SCM Agreement*" and that the United States had therefore failed to comply with the recommendations and rulings of the DSB.³⁷

3.14 It is, in our view, appropriate for us, as arbitrators acting under Article 22.6 of the DSU, to take into account this determination made in the context of compliance proceedings under Article 21.5 of the DSU and to assume *a priori*, on that basis, that the United States has not complied with the relevant recommendations and rulings of the DSB.

3.15 At the same time, we note that panels, including compliance panels, have the discretion to take into account a modification or a repeal of the measure before them subsequent to their establishment. We note in particular the following ruling by the Appellate Body in *EC – Bananas III (Article 21.5 – Ecuador II)* in relation to the jurisdiction of compliance panels:

"We thus consider it to be within the discretion of the panel to decide how it takes into account subsequent modifications or a repeal of the measure at issue. Accordingly, panels have made findings on expired measures in some cases and declined to do so in others, depending on the particularities of the disputes before them."³⁸

3.16 In these proceedings, the United States argues that because the legal basis of the initial measures has ceased to exist, it has complied with the DSB's recommendations and rulings since the rulings of the DSB, and since the referral of the matter before us to arbitration, and requests us to take this circumstance into consideration.

3.17 We note that it is normally not the task of arbitrators acting under Article 22.6 of the DSU to review whether compliance has been achieved or not, as arbitral proceedings under this provision assume that there has been no compliance, and this will normally have been determined through compliance proceedings under Article 21.5 of the DSU, as was the case here.

3.18 However, even assuming that we may be entitled, as Arbitrator acting under Article 22.6 of the DSU and Article 7.9 of the *SCM Agreement*, to make a determination whether the United States has in fact come into compliance with the recommendations and rulings of the DSB since the adoption of the compliance reports, we are not persuaded that the United States has demonstrated to us that it has complied with the relevant recommendations and rulings of the DSB.

3.19 We note that "compliance" with the recommendations and rulings of the DSB must be understood to refer to "substantive compliance". As was recently stated by the Appellate Body in *US – Continued Suspension*:

"The requirements in Article 21.5 to examine whether compliance measures exist and whether the measures taken to comply are consistent with the covered agreements also suggest that substantive compliance is required, rather than formal removal of the inconsistent measure."³⁹

³⁷ See Panel Report, *US – Upland Cotton (Article 21.5 – Brazil)*, para. 10.255. See also Appellate Body Report, *US – Upland Cotton (Article 21.5 – Brazil)*, para. 448(c).

³⁸ Appellate Body Report, *EC – Bananas III (Article 21.5 – Ecuador II)*, para. 270.

³⁹ Appellate Body Report, *US – Continued Suspension*, para. 308.

3.20 It is clear, therefore, that a mere formal removal of the inconsistent measure would not necessarily mean that compliance has been achieved, if "substantive compliance" has not been achieved.

3.21 Both the original and compliance panels examined the ML and CCPs in the context of the 2002 Farm Bill. Brazil does not dispute that the 2002 Farm Bill has expired, but it observes that the 2008 Farm Bill now provides a continuation of the marketing loan programme at the same rate as that provided by the 2002 Farm Bill and that the counter-cyclical payments provisions provided in 2002 Farm Bill are retained in the 2008 Farm Bill.

3.22 Brazil has in particular presented a "side-by-side" comparison between the 2002 and 2008 Farm Bills, posted on the website of the USDA.⁴⁰ (see Annex 1) From this comparison table, it is clear that the main features of the CCP as originally provided in 2002 FSRI Act have been retained in the 2008 Farm Bill. In fact, Section 1104 of both the 2002 FSRI Act and the 2008 Farm Bill provides: "(a) ... for each of the ... crop year for each covered commodity, the Secretary shall make counter-cyclical payments to producers on farms for which payments yields and base acres are established with respect to the covered commodity if the Secretary determines that the effective price for the covered commodity is less than the target price for the covered commodity". Therefore, the substance of the provisions on CCP as originally provided in the 2002 FSRI Act has been incorporated in the 2008 Farm Bill. It is also noteworthy from Section 1104 of both Bills that the target prices for the selected commodities are also unchanged. The only change is the inclusion of additional commodities.⁴¹

3.23 Similarly, a reading of both the 2002 Farm Bill and the 2008 Farm Bill also reveals that the provisions on ML in the 2002 Farm Bill were retained in the 2008 Farm Bill. These main provisions include Sections 1201 and 1202, 1203 and 1204 of the Bills.

3.24 Section 1201 concerns "Availability of non recourse marketing assistance loans for loan commodities" in both Farm Bills. This provision includes detailed rules on "Availability", "Terms and conditions", "Eligible production" and "Compliance with conservation and wetland requirements". The only difference is that under the "Availability" item, the 2002 Farm Bill provided for an application period from 2002 to 2007, whereas the 2008 Farm Bill provides for an application period from 2008 to 2012. Section 1202 of both Farm Bills provides "Loan Rates for non recourse marketing assistance loans", in which the rates for most of the products are unchanged (e.g., cotton: 0.52 cents), and a few rates have been slightly adjusted. Section 1203 of both Farm Bills provides a "Term of Loan" of 9 month duration. Section 1204 of the two Bills provides an identical "Repayment of Loans" mechanism.

3.25 Therefore, from the wording of the relevant sections of the two Bills, we consider that the legal basis for the "marketing loan measure" is unchanged. In other words, the substance of the rules that the original panel and the Appellate Body found not to be in compliance with the *SCM Agreement*, and which the compliance panel and the Appellate Body found not to have been withdrawn, have been retained. The new legislative instrument in which they are found has not wrought any substantive changes to their nature, in terms of their "structure, design and operation".⁴²

3.26 The United States has not challenged Brazil's assertion that the relevant provisions under the 2008 Farm Bill are essentially the same as under the 2002 Farm Bill, and it has not provided any indication as to why the same payments might not continue under the 2008 Farm Bill.

⁴⁰ Exhibit Bra-752 (2008 Farm Bill Side-By-Side, USDA, <http://www.ers.usda.gov/FarmBill/2008/Titles/TitleIcommodities.htm>) (accessed December 2008).

⁴¹ See 2002 FSRI Act, Exhibit Bra-29, 2008 Farm Bill, Exhibit Bra-735.

⁴² See Panel Report, para. 7.1289.

3.27 The United States argues, however, that because the 2008 Farm Bill only recently came into effect, it is difficult to make any conclusion on the basis of actual data to the effect that payments would continue at the same level under the 2008 Farm Bill, so that this conclusion is only speculation that reflects Brazil's assumptions regarding how the marketing loan and countercyclical payments will be made in the future.

3.28 These elements suggest that the United States in fact recognizes that ML and CCPs may continue to be granted under the 2008 Farm Bill, although it considers that the amount of payments that might be made under the 2008 Farm Bill is still uncertain, in light of its recent entry into force. To the extent that the 2002 Farm Bill has been terminated, but has been replaced with another Bill providing for essentially the same measures that were found to be inconsistent as they applied under the original legal instrument, this would not provide a basis upon which to conclude that the United States has complied with the recommendations and rulings relating to these measures. Rather, it would need to be established that the inconsistencies that were the object of the rulings have been remedied. As the Appellate Body expressed it, "substantive compliance is required, rather than formal removal of the inconsistent measure" in order to achieve full implementation of the DSB's recommendations and rulings.⁴³ Nor can any uncertainty about what might happen in the future dissuade this Arbitrator from assessing the adverse effects determined to exist in relation to a measure which did exist and which, on the facts, continues to exist.⁴⁴

3.29 In the circumstances of this case, the elements before us suggest that, although the legal basis for the granting of ML and CCPs has been modified, such payments continue to be offered and may continue to be made under a new legal basis. We have not been provided with any indication that the payments that may be made under the 2008 Farm Bill would be of a different nature than those that gave rise to the rulings at issue. On the contrary, it seems the United States does not dispute that such payments may occur.

3.30 To the extent that we might be entitled to review, in the context of these proceedings whether compliance has been achieved, we would therefore not have a sufficient basis to conclude, in light of the elements before us, that it has been.

3.31 Furthermore, we note that the findings in the underlying proceedings related to the different types of payments at issue, rather than to the 2002 Farm Bill as such. The compliance panel explicitly states that "the [original] panel did not state that it had found that, in addition to subsidies paid in MY 1999-2002, the Farm Bill itself was inconsistent with Articles 5 and 6 of the *SCM Agreement*".⁴⁵ Rather, it is the payments under this Bill that were the measures at issue.

3.32 In light of these elements, the Arbitrator concludes that the United States has failed to establish that there is no longer any legal basis for Brazil to seek countermeasures in relation to the ML and CCPs.

3.33 We must therefore now consider whether Brazil's proposed level of countermeasures is "commensurate with the degree and nature of the adverse effects determined to exist", in accordance with Article 7.9 of the *SCM Agreement*. For this purpose, we must first clarify the meaning of these terms.

⁴³ See Appellate Body Report, *US – Continued Suspension*, para. 308.

⁴⁴ We note in this respect that wherever the level of countermeasures is determined in the form of a fixed amount to be applied on an annual basis, it is inherent in this approach that this amount will not exactly track the future evolution of the situation in consideration of the actual level of payments to occur in the future under the subsidies at issue. Yet, the United States takes no issue with this approach as a matter of principle. The fact that the actual level of future payments under the programs may be uncertain to date cannot in itself be an obstacle to calculating a level of countermeasures to be applied.

⁴⁵ Panel Report, *US – Upland Cotton (Article 21.5 – Brazil)*, para. 9.49.

IV. ASSESSMENT OF BRAZIL'S PROPOSED LEVEL OF COUNTERMEASURES

A. MAIN ARGUMENTS OF THE PARTIES

4.1 In its request to the DSB, Brazil requested authorization to take countermeasures in the annual amount of US\$1.037 billion until such time as the United States withdraws or removes the adverse effects of certain price-contingent subsidies determined to have caused significant price suppression in the world upland cotton market. These subsidies included marketing loan programme payments, user marketing (Step 2) payments, market loss assistance payments and counter-cyclical payments.

4.2 In its Methodology Paper, Brazil further explained that suppressed prices on the world cotton market have two types of negative consequences for farmers worldwide: income losses on actual production ("*sales value* effects") and a replacement of foreign supply by US production on the world market ("*reduced production* effects"). To quantify these effects, Brazil relies on a partial equilibrium model already referred to in the compliance proceedings, the "Sumner model". By Brazil's own description, "the issue that the economic model addresses is the magnitude of the impact that specific US cotton subsidies have on quantities supplied and on world market prices for cotton".⁴⁶

4.3 Brazil quantifies the adverse effects of these subsidies to cotton farmers in the rest of the world, based on Marketing Year (MY) 2005. Brazil estimates that world market prices were suppressed by 10.75 per cent in MY 2005. It estimates that the subsidies caused US cotton production to be 18.8 per cent higher than it would otherwise have been but for the subsidies, and that this increased production boosted imports by approximately 24 per cent in the same year. Brazil further estimates that the subsidies have led to a replacement of foreign cotton supply amounting to 2.2 per cent of actual production. On this basis, Brazil concludes that "adverse effects in MY 2005 amounts to US\$3.335 billion, consisting of US\$2.73 billion in sales value effects and US\$605 million in reduced production effects".⁴⁷ However, Brazil limits its request for countermeasures to an amount of US\$1.037 billion, in line with its original request.

4.4 The United States considers that the requested countermeasures "far exceed what would be commensurate with the adverse effects determined to exist".⁴⁸ The United States first notes that the current conditions for US cotton producers provide guidance for the effects of US cotton support payments, and that since the 2006 marketing year, the US cotton sector has experienced a significant contraction in production, exports and domestic use. According to the United States, total cotton harvested area for the United States is forecasted at only 7.8 million acres in 2008, the lowest in 25 years⁴⁹, and that US shares of exports and world production in 2008 will reflect several years of decline, with US production in that year being 43 per cent below the 2005 crop. The United States notes that Brazilian cotton production trended up in 2007 and that Brazil's exports were expected to reach a record in 2008.

4.5 The United States further identifies a number of "legal, economic and conceptual errors" in Brazil's calculations. Specifically, the United States identifies the following errors: (i) the decision not to limit the calculations to only the effects of the programs *on Brazil*; (ii) flawed choices for key parameters in the model; (iii) the isolation of data to a single year; and (iv) the failure to limit the proposed countermeasures to the portion of the effects of the payments that result in the finding of inconsistency with the *SCM Agreement*. Brazil disagrees with each of these arguments.

⁴⁶ Brazil's Methodology Paper, para. 73.

⁴⁷ Brazil's Methodology Paper, para. 69.

⁴⁸ US written submission, Section IV, para. 229 ff.

⁴⁹ US written submission, para. 231.

B. MANDATE OF THE ARBITRATOR AND BURDEN OF PROOF

4.6 We recall that Article 7.9 of the *SCM Agreement* provides that:

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

4.7 In addition, Article 7.10 of the same Agreement defines the mandate of the arbitrator as follows:

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

4.8 In these proceedings, we are therefore called upon to determine whether the countermeasures proposed by Brazil in relation to the marketing loans and countercyclical payments are "commensurate with the degree and nature of the adverse effects determined to exist" within the meaning of Article 7.9 of the *SCM Agreement*. The United States identifies a number of "errors" in Brazil's request, including legal errors.

4.9 The United States agrees that, as the party challenging the proposed countermeasures, it bears the burden of demonstrating that the countermeasures proposed by Brazil are not "commensurate with the degree and nature of the adverse effects determined to exist" within the meaning of Article 7.9 of the *SCM Agreement*.⁵⁰

4.10 The United States observes, however, that Brazil is obligated to provide the evidence to support its arguments and to provide the relevant facts for the Arbitrator to fulfil its mandate.⁵¹

4.11 The basis for these proceedings is a challenge initiated by the United States in relation to Brazil's request to be authorized by the DSB to take countermeasures in relation to certain inconsistent measures. These circumstances are analogous to the situation in arbitral proceedings initiated under Article 22.6 of the DSU alone, and in arbitral proceedings initiated under Article 22.6 of the DSU and Article 4.10 of the *SCM Agreement* in relation to prohibited subsidies.

4.12 In the context of proceedings under Article 4.11 of the *SCM Agreement* and Article 22.6 of the DSU, arbitrators have consistently determined that the party objecting to the proposed countermeasure bears the burden to establish a prima facie case or presumption that the countermeasures are not "appropriate" within the meaning of Article 4.11 and that it is then up to the party proposing the countermeasures to rebut such presumption.⁵²

4.13 The same approach applies, in our view, to proceedings under Article 22.6 of the DSU and Article 7.10 of the *SCM Agreement*. We therefore find that the United States bears the initial burden of establishing the countermeasures are not "commensurate with the degree and nature of the adverse effects determined to exist" and that Brazil bears the burden of rebutting such conclusions.

⁵⁰ US responses to questions from the Arbitrator, question 41, para. 49.

⁵¹ US responses to questions from the Arbitrator, question 41, para. 50.

⁵² See Decision of the Arbitrator, *Brazil – Aircraft (Article 22.6 – Brazil)*, paras. 2.8-2.9.

4.14 The Arbitrator is also of the view that this allocation of burden of proof does not alleviate the burden on each party to establish the facts that it alleges during the proceedings. As observed by the arbitrator on *US – FSC (Article 22.6 – EC)*, "it is generally for each party asserting a fact, whether complainant or respondent, to provide proof thereof".⁵³ Accordingly, it is also for Brazil to provide evidence in support of the facts that it advances. The Arbitrator will consider all the evidence and arguments provided by both parties (United States and Brazil) to determine whether the proposed countermeasures are "commensurate with the degree and nature of the adverse effects determined to exist".

4.15 The United States further considers that once the burden of proof has been met, the Arbitrator is not limited to agreeing or disagreeing with the parties. Rather, the Arbitrator's task is to determine, in the case of actionable subsidies, countermeasures "commensurate with the degree and nature of the adverse effects determined to exist".⁵⁴ Brazil also observes that, if the United States succeeds in establishing that Brazil's formula does not meet the applicable legal standard, the Arbitrator can consider adjustments to Brazil's formula, or if none are possible, alternative formulae.⁵⁵ Brazil further notes that, while the Arbitrator enjoys flexibility to make adjustments to Brazil's formula, Brazil expects that in the interest of due process, the Arbitrator would offer the parties the opportunity to comment on any material departures it wishes to explore.⁵⁶

4.16 We agree that, in the event that we find that Brazil's proposed countermeasures are not commensurate with the degree and nature of the adverse effects determined to exist, we would be required also to determine what would constitute such countermeasures. This would enable the complaining party to seek an authorization consistent with our decision, as foreseen in Article 22.7 of the DSU. In order to fulfil this part of our mandate, we may be required to adopt an approach or methodology that differs from those proposed by the parties.

4.17 We now turn to a consideration of the terms of the applicable legal standard for the review of Brazil's countermeasures, before considering Brazil's proposed countermeasures in light of these determinations.

C. COUNTERMEASURES "COMMENSURATE WITH THE DEGREE AND NATURE OF THE ADVERSE EFFECTS DETERMINED TO EXIST" (ARTICLE 7.9 AND 7.10 OF THE *SCM AGREEMENT*)

4.18 Paragraphs 9 and 10 of Article 7 of the *SCM Agreement* are "special or additional rules and procedures" identified in Appendix 2 of the DSU.⁵⁷ Article 1.2 of the DSU provides that "to the extent that there is a difference between the rules and procedures of this Understanding and the special or additional rules and procedures set forth in Appendix 2, the special or additional rules and procedures in Appendix 2 shall prevail".

4.19 The terms of Article 7.9 of the *SCM Agreement*, as a "special or additional rule and procedure", should be interpreted on their own terms. It is clear that they may embody different rules, which would prevail in case of conflict. Nonetheless, Article 22.6 of the DSU remains relevant, as the general legal basis under which the proceedings are conducted. Indeed, Article 7.9 of the

⁵³ Decision of the Arbitrator, *US – FSC (Article 22.6 – US)*, para. 2.11.

⁵⁴ US responses to questions from the Arbitrator, question 70, para. 3.

⁵⁵ Brazil's responses to questions from the Arbitrator, question 70, para. 6.

⁵⁶ Brazil's responses to questions from the Arbitrator, question 70, para. 8. See also the US comments to Brazil's response, para. 11.

⁵⁷ Throughout this section of the report, we will refer to the terms "commensurate with the degree and nature of the adverse effects determined to exist" in Article 7.9 of the *SCM Agreement*. This reference should be understood to refer also to the same terms in Article 7.10 of the *SCM Agreement*. We assume that these terms have the same meaning in both provisions.

SCM Agreement refers expressly to Article 22.6 of the DSU as the legal basis for arbitral proceedings relating to countermeasures in relation to actionable subsidies.

4.20 In accordance with the terms of Article 3.2 of the DSU, the terms of Article 7.9 of the *SCM Agreement* should be interpreted in accordance with the customary rules of interpretation of public international law, as reflected in particular in Articles 31 and 32 of the Vienna Convention on the Law of Treaties ("Vienna Convention"). In particular, as reflected in Article 31.1 of the Vienna Convention, "a treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose".

4.21 For the sake of clarity, it is useful to start the analysis with the terms of the provisions first, and to then turn to their context and object and purpose.

1. The terms of Article 7.9 of the *SCM Agreement*

4.22 With respect to countermeasures in relation to actionable subsidies, Article 7.9 of the *SCM Agreement* provides that:

"[T]he DSB shall grant authorisation to the complaining Member to take countermeasures, commensurate with the degree and nature of the adverse effects determined to exist ..."

4.23 This text therefore comprises three elements:

- (a) "countermeasures";
- (b) "commensurate with the degree and nature" and
- (c) "the adverse effects determined to exist".

We consider the meaning of these elements in turn.

(a) "countermeasures"

4.24 We note at the outset that the term "countermeasures" is used to designate retaliatory measures in the WTO Agreement only in the *SCM Agreement*. This contrasts with the terms of Article 22 of the DSU, which refers to the "suspension of concessions or other obligations". However, it is not argued by either party in these proceedings that the term "countermeasures" would designate, in the *SCM Agreement*, anything other than a temporary suspension of certain obligations, and this is what we understand this term to refer to.

4.25 The prefix "counter-" can be defined as meaning "against, in return".⁵⁸ The Oxford English Dictionary further cites the term "counter-measure" as an illustration of a situation in which this prefix is used to indicate something that is "[d]one, directed, or acting against, in opposition to, as a rejoinder or reply to another thing of the same kind already made or in existence". Another dictionary defines the term "countermeasure" as an "action or device designed to negate or offset another".⁵⁹

4.26 Brazil draws attention to the fact that the term "countermeasures" refers to measures taken "against" something, to "counteract" something. In the context of Article 7.9 of the *SCM Agreement*, Brazil notes, the term refers to "affirmative action taken against the responding Member's failure to

⁵⁸ *Oxford English Dictionary*, at www.oed.com.

⁵⁹ *Merriam Webster Dictionary*, at www.merriamwebster.com.

remove the adverse effects of a subsidy or to withdraw that subsidy, as required by Article 7.8".⁶⁰ The United States seems to essentially agree with this basic premise.⁶¹ In light of the definitions highlighted above, we also agree that "countermeasures" are, in essence, measures taken to "counteract" something, and specifically, in the context of Article 7.9 of the *SCM Agreement*, measures taken to act against, or in response to, a failure to remove the adverse effects of, or withdraw, an actionable subsidy within the required time period.

4.27 In Brazil's view, the dictionary meanings of this term further indicate that it refers to retaliatory action that goes "beyond the mere rebalancing of trade interests".⁶² The United States, on the contrary, highlights that definitions of the term "counter" include notions of "balance" and "duplicate", so that an appropriate countermeasure would be one that would "balance out the inconsistency or duplicate the loss of concessions resulting from the breach".⁶³

4.28 We are not convinced that the use of the term "countermeasures" necessarily connotes, in and of itself, an intention to refer to retaliatory action that "goes beyond the mere rebalancing of trade interests"⁶⁴, as Brazil suggests. As noted above, the term indicates that the action is taken in response to another, in order to "counter" it. This does not necessarily connote, in our view, an intention to "go beyond" a rebalancing of trade interests. Indeed, we are not convinced that the dictionary meanings of the term, in and of themselves, provide any compelling guidance as to the exact *level* of countermeasures that may be permissible under Article 7.9 of the *SCM Agreement*. We also note that the term "countermeasures" is similarly used in Article 4.10 of the *SCM Agreement*, where the permissible level of countermeasures is defined differently, in terms of "appropriateness".

4.29 Brazil also refers to the use of the term "countermeasures" in public international law, as reflected in the Articles on State Responsibility of the International Law Commission (ILC)⁶⁵, as an "additional interpretative consideration", to highlight that, "under the ILC Articles, countermeasures are taken with the goal of encouraging – 'inducing' – the responsible State to comply with its obligations, without making it impossible to comply, and without punishing the respondent."⁶⁶

4.30 We note that the term "countermeasures" is the general term used by the ILC in the context of its Articles on State Responsibility to designate temporary measures that injured States may take in response to breaches of obligations under international law.⁶⁷ This has been noted by arbitrators in the context of interpreting Article 4.10 of the *SCM Agreement*.⁶⁸

⁶⁰ Brazil's written submission, para. 51.

⁶¹ See US responses to questions from the Arbitrator, question 43, para. 56: "the "countermeasures" are to "counter the inconsistency with the *SCM Agreement*."

⁶² Brazil's written submission, para. 26.

⁶³ US responses to questions from the Arbitrator, question 43, para. 56.

⁶⁴ Brazil's written submission, para. 26.

⁶⁵ The International Law Commission was established by the UN General Assembly for the promotion of the progressive development of international law and its codification. The Commission adopted in 2001 a set of draft articles on responsibility of States for internationally wrongful acts consisting of 59 articles as well as commentaries thereto. The General Assembly, in resolution 56/83 of 12 December 2001, as recommended by the Commission, took note of the articles on responsibility of States for internationally wrongful acts, the text of which was annexed to the resolution, commended them to the attention of Governments without prejudice to the question of their future adoption or other appropriate action. See <http://www.un.org/law/ilc/>.

⁶⁶ Brazil's written submission, para. 43.

⁶⁷ See http://untreaty.un.org/ilc/texts/instruments/english/commentaries/9_6_2001.pdf.

⁶⁸ See Decision by the Arbitrator, *US – FSC (Article 22.6 – US)*, para. 5.58.

4.31 We agree that this term, as understood in public international law, may usefully inform our understanding of the same term as used in the *SCM Agreement*.⁶⁹ Indeed, we find that the term "countermeasures", in the *SCM Agreement*, describes measures that are in the nature of countermeasures as defined in the ILC's Articles on State Responsibility.

4.32 At this stage of our analysis, we therefore find that the term "countermeasures" essentially characterizes the *nature* of the measures to be authorized, i.e. temporary measures that would otherwise be contrary to obligations under the relevant WTO Agreement(s) and that are taken in response to a breach of an obligation under the *SCM Agreement*. This is also consistent with the meaning of this term in public international law as reflected in the ILC Articles on State Responsibility.

4.33 As to the permissible *level* of countermeasures that may be authorized under Article 7.9 of the *SCM Agreement*, that Article provides specific instruction, through the terms "commensurate with the degree and nature of the adverse effects determined to exist". We now consider these terms.

(b) "commensurate with the degree and nature of the adverse effects determined to exist"

4.34 The expression "commensurate with the degree and nature of the adverse effects determined to exist" contains two elements: the term "commensurate" and the "degree and nature of the adverse effects determined to exist". We consider these elements successively.

(i) "*commensurate*"

4.35 Brazil notes that dictionary definitions of the term "commensurate" point to a notion of "correspondence" in "extent, magnitude or degree" as well as to "proportion" and that this term defines "a particular relationship between two things, in this case "countermeasures" on the one hand, and "the degree and nature of the adverse effects determined to exist", on the other".⁷⁰

4.36 Dictionary definitions of this term include: "equal in measure or extent: coextensive" and "corresponding in size, extent, amount, or degree: proportionate"⁷¹, "of equal extent, coextensive".⁷²

4.37 In light of these elements, we agree that the term "commensurate" essentially connotes a "correspondence" between two elements. In the context of Article 7.9, the "correspondence" is between the countermeasures and the "degree and nature of the adverse effects determined to exist".

4.38 Brazil also highlights that this term "does not connote equality, but adequacy, congruity, harmony, and proportion. These words, which carry both qualitative and quantitative dimensions,

⁶⁹ We also note however that, by their own terms, the Articles of the ILC on State Responsibility do not purport to prevail over any specific provisions relating to the areas it covers that would be contained in specific legal instruments. We note in particular the following Commentary of the ILC:

"In common with other chapters of these articles, the provisions on countermeasures are residual and may be excluded or modified by a special rule to the contrary (see article 55). Thus, a treaty provision precluding the suspension of performance of an obligation under any circumstances will exclude countermeasures with respect to the performance of the obligation. Likewise, a regime for dispute resolution to which States must resort in the event of a dispute, especially if (as with the WTO dispute settlement system) it requires an authorization to take measures in the nature of countermeasures in response to a proven breach."

⁷⁰ Brazil's written submission, para. 53.

⁷¹ *Merriam Webster Dictionary* online, at www.merriam-webster.com

⁷² *Shorter Oxford English Dictionary*, p. 459.

show that countermeasures are not defined with the precision of equality, but more broadly in both qualitative and quantitative terms".⁷³

4.39 We agree that the term "commensurate" does not suggest that exact or precise equality is required, between the two elements to be compared, i.e. in this case, the proposed countermeasures and the "degree and nature of the adverse effects determined to exist". To that extent, we agree that the term "commensurate" connotes a less precise degree of equivalence than exact numerical correspondence. Nonetheless, the term "commensurate" does indicate, in our view, a relationship of *correspondence* and proportionality between the two elements, and not merely a relationship of "adequacy" or "harmony" as suggested by Brazil. We do not exclude that this correspondence may be qualitative as well as quantitative. The exact nature of the correspondence at issue will further be informed by the identification of what exactly the proposed countermeasures are required to be "commensurate" with. This is defined through the terms "the degree and nature of the adverse effects determined to exist".

(ii) *The "degree and nature" of the adverse effects*

4.40 The text of Article 7.9 refers to the "degree and nature" of the adverse effects rather than their "level" or "magnitude". Brazil highlights in this respect the difference with the terms of Article 22.4 of the DSU, which requires "equivalence" in the "level" of nullification or impairment suffered by the complaining Member. Brazil invites the Arbitrator to approach the determination with reference to the notion of "reasonableness" and points to a finding by the Appellate Body in the context of another provision, to the effect that "reasonableness" implies a degree of flexibility that involves a consideration of the specific circumstances of the case.⁷⁴

4.41 We agree that the reference to both the "degree" and the "nature" of the adverse effects determined to exist suggests that the correspondence that is required to exist, between the proposed countermeasures and the "degree and nature of the adverse effects", may encompass both quantitative and qualitative elements. The "degree" of the effects could be understood as a quantitative element, whereas the reference to the "nature" of the adverse effects seems to point to something more qualitative.

4.42 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.⁷⁵ 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".⁷⁶

4.43 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.

4.44 Brazil also notes that the "degree" of adverse effects refers to the "extent or scope" of the adverse effects "in terms of their intensity or capacity or potential for causing disruption of markets or

⁷³ Brazil's written submission, para. 56.

⁷⁴ See Brazil's written submission, para. 57.

⁷⁵ Brazil's written submission, para. 63.

⁷⁶ US responses to questions from the Arbitrator, question 66, para. 175.

trading relationships".⁷⁷ Brazil also observes that there may be a correlation between the "nature" and "degree" of the adverse effects, in that "the broader the scope of the nature of the adverse effects, the more likely the "degree" of adverse effects will be more severe in terms of actual or potential market disruption".⁷⁸

4.45 The United States, for its part, considers that the reference to the "degree and nature" of the adverse effects "is a reminder that countermeasures should fit only that part of the subsidy that is inconsistent". The United States also argues that the language of Article 7.9 ensures that countermeasures are limited to "what is necessary to address the adverse effects of the subsidies", and not more. The United States considers that anything above that "would be punitive". The United States thus concludes that "the Arbitrators must be satisfied that the countermeasure does not exceed what would be sufficient to respond to that part of the effects of the actionable subsidies that has been found to cause significant price suppression and adverse effects on Brazil".⁷⁹

4.46 We understand these arguments of the parties as essentially drawing attention to the permissible scope of what may be taken into account in assessing the "commensurateness" of the proposed countermeasures in relation to the "degree and nature" of the adverse effects determined to exist in the specific case at hand. The United States' arguments essentially highlight the fact that the proposed countermeasures may not *exceed* the scope of the findings, as they relate only to those adverse effects that have been determined to exist in the specific case at hand, and that this is the only basis for the findings in relation to the subsidy at issue. Brazil's arguments, on the other hand, point to the fact that the full extent of the degree and nature of these adverse effects must be taken into account.

4.47 We agree in principle with both of these propositions. In assessing the "commensurateness" of the proposed countermeasures to the "degree and nature" of the adverse effects determined to exist, we are entitled to take into account fully the "degree and nature" of these adverse effects as they present themselves in the case at hand, but we are not permitted to do more than that. In other words, the "degree and nature" of the adverse effects determined to exist in the case at hand constitute the entirety of what we may and must consider in assessing the "commensurateness" of the proposed countermeasures in that case.

4.48 The parties disagree as to what exactly this implies in the circumstances of this case. We will consider this question in Section IV.D.1 below in the context of our assessment of Brazil's proposed countermeasures in this case. We now turn to the final element of the terms of Article 7.9, the "adverse effects determined to exist".

(iii) *The "adverse effects determined to exist"*

4.49 Brazil observes that the term "adverse effects determined to exist" sends the treaty interpreter back to the precise findings on adverse effects made by the panels and the Appellate Body as these constitute the "adverse effects determined to exist". We agree.

4.50 The expression "adverse effects determined to exist" refers us to the specific "adverse effects" within the meaning of Articles 5 and 6 of the *SCM Agreement* that form the basis of the underlying findings in the case at hand.

⁷⁷ Brazil's written submission, para. 64.

⁷⁸ Brazil's written submission, para. 64.

⁷⁹ US written submission, para. 300.

4.51 We note in this respect that Article 5 of the *SCM Agreement* identifies three categories of "adverse effects to the interests of other Members", that "no Member should cause, through the use of any subsidy referred to in paragraphs 1 and 2 of Article 1". These are:

- (a) injury to the domestic industry of another Member;
- (b) nullification or impairment of benefits accruing directly or indirectly to other Members under GATT 1994 in particular the benefits of concessions bound under Article II of GATT 1994;
- (c) serious prejudice to the interests of another Member."

4.52 Article 7.1 further provides the possibility for any WTO Member to request consultations with another Member, whenever it has reason to believe that "any subsidy referred to in Article 1, granted or maintained by another Member, results in injury to its domestic industry, nullification or impairment or serious prejudice".

4.53 In principle, therefore, the "adverse effects determined to exist" in the underlying proceedings ultimately leading to a request for countermeasures under Article 7.9 of the *SCM Agreement* may be in the form of injury to the domestic industry of a Member, nullification or impairment, or serious prejudice to the interests of another Member.

2. Context

4.54 A number of provisions within the *SCM Agreement* provide useful context for the interpretation of Article 7.9. As noted above, the notion of "adverse effects" and the definition of the various types of adverse effects under Articles 5 and 6 of the Agreement shed light on the expression "degree and nature of the adverse effects determined to exist".

4.55 Article 4.10 of the *SCM Agreement* and Article 22.4 of the DSU also provide useful context for a proper understanding of this provision. Article 4.10 of the *SCM Agreement* provides the legal standard for countermeasures in relation to prohibited subsidies. Under that provision, countermeasures in relation to prohibited subsidies must be "appropriate", and "not ... disproportionate in light of the fact the subsidies dealt with under these provisions are prohibited". The clear difference in the wording of both provisions within the *SCM Agreement* confirms to us that the terms of Article 7.9, which expressly refer to the "degree and nature of the adverse effects determined to exist", are intended to closely tailor, in all cases, the countermeasures to the legal basis for the underlying findings. We also note that there is no suggestion, in Article 7.9, that there would be any flexibility to take into account any considerations other than the "degree and nature of the adverse effects determined to exist". This can be understood to reflect the specificity of the legal basis on which findings arise in relation to actionable subsidies, which are not prohibited *per se*. The scope of potential countermeasures is accordingly limited in scope, to the "degree and nature" of those effects of the subsidy that are the basis for the successful challenge.

4.56 These elements confirm our understanding of the meaning of the terms of Article 7.9, as we have determined it so far on the basis of the terms of the provision.

3. Object and purpose

4.57 The question of the objective of retaliatory measures in the WTO has been addressed in the context of proceedings under Article 22.4 of the DSU. The arbitrator on *EC – Bananas III (US)* (Article 22.6 – EC) thus found that:

"[T]he overall objective of compensation or the suspension of concessions or other obligations as described in Article 22.1:

'Compensation and the suspension of concession or other obligations are temporary measures available in the event that the recommendations or rulings are not implemented within a reasonable period of time. However, neither compensation nor the suspension of concessions or other obligations is preferred to full implementation of a recommendation to bring a measure into conformity with the covered agreements. Compensation is voluntary and, if granted, shall be consistent with the covered agreements.'

Accordingly, the authorization to suspend concessions or other obligations is a temporary measure pending full implementation by the Member concerned. We agree with the United States that this *temporary* nature indicates that it is the purpose of countermeasures to *induce compliance*. But this purpose does not mean that the DSB should grant authorization to suspend concessions beyond what is *equivalent* to the level of nullification or impairment. In our view, there is nothing in Article 22.1 of the DSU, let alone in paragraphs 4 and 7 of Article 22, that could be read as a justification for counter-measures of a *punitive* nature."

4.58 This objective of suspension of concessions or other obligations under Article 22.4 of the DSU has been recently confirmed by the Appellate Body in *US – Continued Suspension*.⁸⁰ Arbitrators have also found that the objective of countermeasures under Article 4.10 of the *SCM Agreement* is to "induce compliance".⁸¹

4.59 We see no reason to assume that countermeasures under Article 7.9 of the *SCM Agreement* would serve a different purpose. The authorization of countermeasures in relation to actionable subsidies arises in circumstances comparable to those relating to countermeasures under Article 4.10 of the *SCM Agreement* or Article 22.4 of the DSU, i.e. in a situation where the responding Member has failed to comply with the recommendations and rulings of the DSB in the prescribed time period. As under Article 22.4 of the DSU and Article 4.10 of the *SCM Agreement*, countermeasures under Article 7.9 of the *SCM Agreement* constitute temporary measures taken in response to a continued breach of the obligations of the Member concerned, and pending full compliance with the recommendations and rulings of the DSB. We consider, therefore, that countermeasures under Article 7.9 of the *SCM Agreement* also serve to "induce compliance".

4.60 However, we do not consider that this purpose in and of itself provides specific indications as to the *level* of countermeasures that may be permissible under this provision. Indeed, this purpose is common to all three legal bases for countermeasures or suspension of obligations under the WTO Agreements, each of which defines the permissible level of countermeasures in relation to the measures that it relates to. In the case of countermeasures relating to actionable subsidies under the *SCM Agreement*, the permissible level of countermeasures is defined, as we have seen above, through the terms "commensurate with the degree and nature of the adverse effects determined to exist".

4.61 We note that this distinction is also found under general rules of international law, as reflected in the ILC's Articles on State Responsibility, which have been referred to by Brazil in these proceedings. Article 49 of these Articles defines "inducing compliance" as the only legitimate object

⁸⁰ See Appellate Body Report, *US – Continued Suspension*, para. 309.

⁸¹ See Decision by the Arbitrator, *US – FSC (Article 22.6 – US)*, para. 5.57; Decision by the Arbitrator, *Canada – Aircraft Credits and Guarantees (Article 22.6 – Canada)*, paras. 3.47-3.48; Decision by the Arbitrator, *Brazil – Aircraft (Article 22.6 – Brazil)*, paras. 3.44, 3.54, 3.57 and 3.58.

of countermeasures, while a separate provision, Article 51, addresses the question of the permissible level of countermeasures, which is defined in relation to proportionality to the injury suffered, taking into account the gravity of the breach.⁸²

4.62 Finally, we note that the terms of Article 7.9 of the *SCM Agreement*, which refer exclusively to the "degree and nature of the adverse effects determined to exist", do not suggest that there would be any basis for increasing their level, in a subjective sense, to specifically take into account a superadded objective of inducing compliance. We are not empowered to "adjust" the level of countermeasures beyond what these terms allow, in our assessment of the level of countermeasures to be authorized. Such an adjustment would go beyond the stated correspondence between the countermeasure and the degree and nature of the adverse effects. The objective of inducing compliance must be seen to arise from the ability of a Member to obtain an authorization, and not from an exaggeration of its permitted amount.

D. ASSESSMENT OF BRAZIL'S PROPOSED COUNTERMEASURES

4.63 Brazil has proposed countermeasures in the amount of US\$1.037 billion in relation to the marketing loan and countercyclical payments. This amount is based on certain assumptions which Brazil argues should be adopted in their calculation, a number of which the United States disagrees with. In addition to that, the United States disagrees with Brazil's actual calculations. We therefore consider the underlying assumptions in Brazil's approach which are disputed by the United States, before turning to the calculation of the proposed countermeasures.

1. **Should the level of countermeasures be limited to the adverse effects suffered by Brazil?**

4.64 Brazil's counterfactual simulation involves a calculation of the global impact of eliminating marketing loans and countercyclical payments. The result of the simulation is the sum of (i) the income losses on actual cotton production due to suppressed world market prices and (ii) the value of the cotton production foregone by otherwise competitive farmers in the rest of the world due to suppressed world market prices. These income losses and the value of the cotton production foregone were incurred not only by Brazilian farmers but also by other non-US producers.

4.65 The United States argues that because the findings in this case concern serious prejudice to Brazil alone, it is necessary to separate the effects on Brazil in particular from the worldwide effects.⁸³ The allowed countermeasures should be equal only to (i) the sum of the income losses on actual Brazilian cotton production due to suppressed world market prices and (ii) the value of the cotton production foregone by Brazilian farmers due to suppressed world market prices.

4.66 We must therefore consider whether the proposed countermeasures may legitimately include a calculation of the effects of the "global impact" of eliminating the subsidies at issue, as argued by Brazil, or whether they should be limited to the adverse impact of the subsidy on Brazil alone.

(a) Arguments of the parties

4.67 Brazil's request seeks to quantify the entirety of the adverse effects of the ML and CCP subsidies on the world cotton market, on the assumption that this is the basis on which the finding of "adverse effects" was made in the underlying proceedings.

4.68 In the view of the United States, the DSB's recommendations and rulings were based on a finding of "present" serious prejudice to the interests of Brazil within the meaning of Article 5(c) of

⁸² See http://untreaty.un.org/ilc/texts/instruments/english/commentaries/9_6_2001.pdf.

⁸³ US written submission, para. 308.

the *SCM Agreement* and Brazil's inclusion of the alleged effects of the payments on the entire world exceeds what is permissible. In the United States' view, the type of "adverse effects" relied on by Brazil in the underlying proceedings in this case is "serious prejudice to the interests of another Member", so that the only relevant effects are those on Brazil, and those are the adverse effects that are relevant here. The United States explains that the panel looked at the "world price" in determining whether there was price suppression as a result of the US measures, and agrees that price effects on the world market would affect Brazil. But, the United States argues, in the final analysis the enquiry focused on the existence of serious prejudice to the interests of Brazil, and the use of a world price (to establish price suppression) does not mean that the finding of *serious prejudice* concerned the entire world. In the United States' view, a recalculation of the effects of the measures on Brazil alone leads to a figure of US\$30.4 million (or US\$134.3 million, without corrections to Brazil's model).⁸⁴

4.69 Brazil responds that the countermeasures must be commensurate with the significant price suppression determined to exist in the world market for cotton.⁸⁵ Brazil argues that in the underlying rulings, both in the initial and compliance proceedings, the Panels and the Appellate Body found "adverse effects to the interests of Brazil in the form of significant price suppression in the world market for cotton"⁸⁶, and that in this dispute, the adverse effects determinations relate to the very existence of a suppressed world market. Brazil considers that the United States is reading Article 7.9 of the *SCM Agreement* out of the Agreement in effectively seeking to equate the standard it contains with the standard in Article 22.4 of the DSU, which provides for equivalence to the level of nullification or impairment (suffered by the complaining party). In Brazil's view, the legal standard under Article 7.9 of the *SCM Agreement* is more flexible than the DSU and can provide for countermeasures on a broader scale than equivalence with nullification or impairment.

4.70 The United States notes that Article 6.3 of the *SCM Agreement* defines four types of "subsidy effects" that may constitute serious prejudice to the interests of a complaining Member. The United States considers that Brazil's interpretation of these provisions would read each in isolation from the governing provisions of Article 5 and from other elements of Article 6. In the United States' view, "when Article 6.3 is interpreted in context, it is evident that the effect on the complaining Member is the concern for all types of subsidy effect described therein".⁸⁷

(b) Analysis by the Arbitrator

4.71 Brazil analyses the findings of the original and compliance panels as confirmed by the Appellate Body in relation to the "adverse effects determined to exist", to support its argument that these effects encompass price suppression on the world cotton market. Brazil highlights the fact that these findings were based on Article 6.3(c) of the *SCM Agreement*, which relates to "price suppression" on the market, and that the relevant market in the panel's findings in this case was the world market. Brazil draws attention to statements by the original and compliance panels that "the effect of [the ML and CCP payments] is significant price suppression on the world market" and that the determination of the effect of the subsidies at issue was made in relation to the world market. Brazil does not dispute that the serious prejudice finding relates to the interest of Brazil but it argues that such serious prejudice is precisely constituted by price suppression *on the world market*.

4.72 The United States, by contrast, draws attention to the fact that these rulings must be seen in their proper context, and that, in particular, the various subparagraphs under Article 6.3 (including subparagraph (c)), must be read in the context of Article 5, which refers to "adverse effects to the interests of other Members" and of subparagraph (c) of the same provision, which defines the notion

⁸⁴ US written submission, para. 245.

⁸⁵ Brazil's written submission, paras. 289-330.

⁸⁶ Brazil's written submission, para. 290.

⁸⁷ US responses to questions from the Arbitrator, question 115, para. 96.

of "serious prejudice" with reference to "the interests of another Member". In this regard the United States points out that the chapeau to Article 6.3 specifically refers to serious prejudice "in the sense of paragraph (c) of Article 5".

4.73 In order to address this issue, we find it useful to consider the specific findings of "adverse effects" at issue in this case as well as the broader legal context in which these findings arise, in order to clarify what the "degree and nature of the adverse effects determined to exist" are in the circumstances of this case.

4.74 As we have noted above, Article 5 of the *SCM Agreement* identifies three types of "adverse effects to the interests of other Members" arising from subsidies, that Members should not cause. These are (a) injury to the domestic industry of another Member, (b) nullification or impairment of benefits accruing to other Members, and (c) "serious prejudice to the interests of another Member".

4.75 We note, at this stage of our analysis, that the expression "adverse effects" is defined with reference to "the interests of other Members". We also note that the specific type of "adverse effect" that is at issue in the circumstances of this case, "serious prejudice", is also defined specifically with reference to the interest of "another Member". It is clear therefore that the notion of "adverse effects" within the meaning of Article 5 and the notion of "serious prejudice" are both inherently and by definition tied to the manner in which they affect the interests of other WTO Members. In the case of "serious prejudice", this is even defined more specifically in relation to the interests of "another Member", rather than all Members.

4.76 Article 6 further elaborates on the circumstances in which "serious prejudice" within the meaning of Article 5(c), i.e. "serious prejudice to the interests of another Member", may arise. In this case, the findings in the underlying proceedings are based on subparagraph (c) of Article 6.3, which provides that "serious prejudice" may arise in any case where:

"[T]he effect of the subsidy is a significant price undercutting by the subsidized product as compared with the price of a like product of another Member in the same market or significant price suppression, price depression or lost sales in the same market."

4.77 Specifically, the findings of the panel and the Appellate Body in this case were based on a determination that the subsidies at issue caused "significant price suppression" within the meaning of this provision, on the world market for cotton.

4.78 Brazil considers that, since these findings relate to the existence of a "significant price suppression" on the *world market*, the entirety of the effects of this price suppression on that market, in other words the worldwide impact of the price suppression, must be the basis for the award of countermeasures in relation to these "adverse effects". In Brazil's view, this would reflect the "degree and nature" of the findings of "adverse effects" in the circumstances of this case.

4.79 Brazil draws our attention in particular to the fact that the various subparagraphs under Article 6.3 define differently in each case the circumstances in which "serious prejudice" may be considered to arise. Brazil highlights the fact that subparagraph (c) of this provision, unlike subparagraphs (a) and (b), does not expressly refer to the specific effect on another Member as the basis for the existence of "serious prejudice".⁸⁸ The United States agrees that each of the provisions of Article 6.3 "take a different approach, reflecting the particular type of serious prejudice to which it pertains".⁸⁹ In the United States' view, however, Article 6.3(c) "guides the fact-finder to the trade

⁸⁸ See Brazil's oral statement, paras. 51 ff.

⁸⁹ US responses to questions from the Arbitrator, question 115, para. 98.

relationship between the complaining Member and the subsidizing Member, so that any decision will be based on the effects of the subsidies on the complaining Member. Those effects can be of price undercutting of the non-subsidized product "in the same market" or of price suppression, price depression, or "lost sales" in the same market" that is, the market in which the products of the subsidizing Member and the complaining Member compete".⁹⁰

4.80 We agree with the United States that, even if subparagraph (c) of Article 6.3 does not expressly refer to the impact of the type of serious prejudice at issue "on the complaining Member", nonetheless the essence of this type of adverse effect is that it causes serious prejudice "to the interests of another Member" as defined in Article 5, item (c). In the circumstances of this case, that "other Member" is Brazil.

4.81 An examination of the terms of the underlying findings in this dispute also provides useful guidance as to their nature. As is highlighted by Brazil, the underlying findings are based on a determination that the subsidies at issue caused "significant price suppression" on the world upland cotton market. Although a determination of the existence of "significant price suppression" on the world market may not, as such, involve or require a specific evaluation of the impact of such price suppression on Brazil, this does not mean that a consideration of this impact was irrelevant to the panel's ultimate finding that such price suppression constituted "serious prejudice to the interests of Brazil". In fact, the original panel specifically explained why it considered that a price suppression on the world market would inevitably affect Brazil:

"We also find that developments on the world upland cotton market price would inevitably affect prices in other markets where Brazil and the United States may compete, due to the nature of the world prices in question, and the relative proportion of that market enjoyed by the United States and Brazil. All individual sales of upland cotton by Brazil and the United States in any domestic market in which both were present would occur against this backdrop."⁹¹

4.82 The Appellate Body referred to this determination, to confirm that "it was not necessary, in these circumstances, for the Panel to proceed to a separate analysis of the prices of Brazilian upland cotton in the world market".⁹² Had the impact on Brazil of the price suppression at issue been irrelevant to the determination, it would not even have been necessary to explain how price suppression on the world market impacted on Brazil.

4.83 The original panel also considered in some detail the question of what may constitute "serious prejudice" to the interests of another Member. In this context, the panel found that:

"[A]t the very least, given the subject-matter covered by the *SCM Agreement* – government subsidies in respect of goods – the effects-based situations identified in the subparagraphs of Article 6.3, and the reference in the chapeau of Article 6.3 to serious prejudice 'in the sense of' Article 5(c), we believe that such 'serious prejudice' may involve the effects of subsidies on the complaining Member's trade in a given product. That is, it addresses the volumes and prices and flows of such trade, which may, by logical extension, affect a producing Member's domestic production of that product. We, therefore, consider that a detrimental impact on a complaining Member's production of, and/or trade in, the product concerned may fall within the concept of 'prejudice' in Article 5(c) of the *SCM Agreement*.

⁹⁰ US responses to questions from the Arbitrator, question 115, para. 99.

⁹¹ Panel Report, para. 7.1313.

⁹² Appellate Body Report, para. 417.

Moreover, the prejudice must be 'serious'. In one of its ordinary meanings, 'serious' means 'important' and 'not slight or negligible'. Thus, the prejudice in terms of the effect on Brazil's production of, and/or trade in, upland cotton must be such as to affect Brazil's production of cotton, to a degree that is 'important', not slight or negligible, or meaningful.

We recall our conclusion that the price suppression is 'significant'. We note, moreover, Brazil has submitted evidence to substantiate its assertions that here is a close relationship between movements of Brazilian prices and movements in the A-index and that Brazilian producers have suffered from the suppressed price trends in the Brazilian market and in Brazilian export markets, including in terms of Brazilian producers having reduced production and investment."⁹³

4.84 These elements suggest to us that, even if the nature of the adverse effects determined to exist in this case is a "significant price suppression" on the world cotton market, the conclusion that such price suppression constitutes serious prejudice "to the interests of Brazil" was not reached in abstraction of the impact of this price suppression on Brazil. On the contrary, the panel specifically explains how this price suppression affects Brazil as a producer and exporter of upland cotton.

4.85 This is further confirmed, in our view, by the terms of Article 7.1 of the *SCM Agreement*, which sets out the basis upon which Members may initiate proceedings in relation to actionable subsidies. This provision foresees that a Member may request consultations with another Member whenever it has reason to believe that any subsidy referred to in Article 1, granted or maintained by another Member, "results in injury to *its* domestic industry, nullification or impairment or serious prejudice" (emphasis added). The terms of this provision suggest to us that the very basis for the initiation of proceedings relating to actionable subsidies is the fact that the complaining Member has reason to believe that the measure concerned affects its own interests.

4.86 The original panel, in considering an argument by Brazil that other WTO Members had suffered serious prejudice as a result of the US subsidies, made a comparable observation:

"The text of Article 7.2 of the *SCM Agreement* makes it clear that the dispute settlement procedures set forth in Article 7 of the *SCM Agreement* may only be invoked by a Member where that Member believes that it has itself suffered serious prejudice as a result of the subsidization. From this, the only logical inference is that the serious prejudice under examination by a WTO panel is the serious prejudice experienced by the complaining Member."⁹⁴

4.87 The panel then finds further support for its conclusion in the terms of Articles 5 and 6 of the *SCM Agreement*. Further to its examination of these provisions, and in light also of the terms of Article 10 of the DSU in relation to the interests of third parties in dispute settlement procedures, the panel concluded that "in examining Brazil's allegations ... that it has suffered serious prejudice to its interests within the meaning of Article 5(c), we take full account of the interests of *all* Members", and it indicates that it has taken into account serious prejudice allegations of other Members:

"[T]o the extent these constitute evidentiary support of the effect of the subsidy borne by Brazil as a Member whose producers are involved in the production and trade in

⁹³ Panel Report, paras. 7.1392-7.1394.

⁹⁴ Panel Report, para. 7.1403.

upland cotton in the world market. However, we have not based our decision on any alleged serious prejudice caused to them."⁹⁵

4.88 These findings confirm us in our conclusion that, even if the "significant price suppression" determined to exist was in relation to the world market, the finding in essence relates to the interests of Brazil and reflects "serious prejudice" to the interests of Brazil specifically. As we have seen above, this determination was in fact not entirely detached from a consideration of the effects of this price suppression on Brazil specifically. On the contrary, the panel took care to explain how the existence of significant price suppression on the world market affected Brazil's production and trade in upland cotton.

4.89 These considerations must, in our view, inform and guide our understanding of what the expression "degree and nature of the adverse effects determined to exist" means in this case. Specifically, we consider that it is the very nature of the findings at issue that they relate to the adverse effects of the subsidies at issue on Brazil. This in turn implies that the scope of the "degree and nature" of these adverse effects must be understood in this light. We therefore understand the "degree and nature of the adverse effects", in the circumstances of this case, to refer to the extent to which Brazil is affected by the price suppression on the world cotton market caused by the ML and CCPs that has been determined to exist in the underlying proceedings. The provisions of the *SCM Agreement* as we have interpreted them, and the findings of the Panel and the Appellate Body in the original proceedings, make it clear to the Arbitrator that these were the "adverse effects determined to exist".

4.90 We find it important, however, to emphasize in this context that, contrary to what Brazil argues, such an interpretation does not "render inutile the implementation obligations for findings of worldwide adverse effects".⁹⁶ The obligation of the United States in terms of implementation remains to *remove* the adverse effects determined to exist (or withdraw the subsidy). This is a distinct question from the question of the quantum of countermeasures that Brazil is entitled to seek, as the complaining Member whose interests are adversely affected by the existence of this significant price suppression, such that these countermeasures would be "commensurate with the nature and degree of the adverse effects (to the interests of Brazil) determined to exist" in this case.

4.91 The fact that the remedies available to Brazil must be commensurate with the degree and nature of the adverse effects in relation to its own interests does not alter the scope of what the United States might be required to do in order to remove such adverse effects. In particular, it does not modify the fact that the source of the adverse effects determined to exist in this case is the existence of "significant price suppression" on the *world* market, and that this is what the United States must address in removing the adverse effects at issue. This is comparable, *mutatis mutandis*, to the situation that arises in the case of a violation, for example, of Article XI of the GATT 1994 through an import ban, in which the scope of the permissible countermeasures is a function of the level of nullification or impairment of benefits accruing to the complaining Member, but this does not modify in any way the nature of the implementation requirements that may arise from the rulings for the Member concerned (for example, through the removal of the WTO-inconsistent import ban).

4.92 In conclusion, in determining whether Brazil's proposed countermeasures are "commensurate with the degree and nature of the adverse effects determined to exist", we must consider whether they are commensurate with the impact *on Brazil* of the price suppression resulting from the granting of ML and CCPs on the world cotton market.

⁹⁵ Panel Report, para. 7.1415.

⁹⁶ Brazil's written submission, para. 325.

2. Should the level of countermeasures be adjusted to account for a threshold of "significant" price suppression?

4.93 Brazil's counterfactual assumes a complete withdrawal of the ML and CCP subsidies. The United States, however, considers that the countermeasures "should fit only that part of the subsidy that is inconsistent, and, to the extent quantities are compared, the Arbitrator should compare the proposed countermeasures with the part of the subsidy causing the price suppression over the "significant" threshold, not the effect of the entire subsidy."⁹⁷

(a) Arguments of the parties

4.94 The United States contends that the Arbitrator should make a downward adjustment to the measure of total effects in order to meet the legal standard under Article 7.10 of the *SCM Agreement*. The United States acknowledges that the precise amount of the deduction is difficult to determine but it believes this to be nonetheless critical.

4.95 The parties were requested to provide a quantitative threshold of significance. Brazil has stated that "it would not consider any price suppression, however small, as significant as long as it is greater than zero"⁹⁸ but did not propose a specific threshold. The United States responded that it cannot propose an exact threshold as to what distinguishes "significant" price suppression from price suppression in this particular dispute.⁹⁹

4.96 Instead, both parties have stressed the nature of the product, the world market for cotton and the behaviour of the price itself. For Brazil, upland cotton is a homogeneous product whose sales are price sensitive.¹⁰⁰ It is a basic and widely traded commodity so that a relatively small decrease or suppression of prices could be significant.¹⁰¹ It also argues that there are continuing effects from past marketing loans and countercyclical payments which are significant in and of themselves.¹⁰²

4.97 The United States claims that the price of upland cotton is highly variable, with frequent swings of substantial degree. It claims that an analysis of cotton price variability over 1980 to 2003 shows that annual cotton price variability for the entire period is in range of 18 to 20 per cent. It argues that strong or frequent fluctuations in price would themselves tend to cut against a finding that any alleged suppression is "significant", especially if the variability frequently brings the price of the product to a level at which the alleged suppression (judged in light of that price) no longer exists.¹⁰³

(b) Analysis by the Arbitrator

4.98 The question before us is whether the Arbitrator should, in assessing the level of Brazil's proposed countermeasures, aim to capture only that portion of the price suppression on the world cotton market resulting from the ML and CCPs that renders it "significant", or whether the entirety of this price suppression may be taken into account.

4.99 We find it useful to start our analysis of this question with a reference to the underlying findings, through which the existence of "significant price suppression" under Article 6.3(c) of the *SCM Agreement* was established.

⁹⁷ US written submission, para. 298.

⁹⁸ Brazil's responses to questions from the Arbitrator, question 38, para. 445.

⁹⁹ US responses to questions from the Arbitrators, question 132, para. 159.

¹⁰⁰ Brazil's comments on US responses to questions from the Arbitrator, question 122, para. 299.

¹⁰¹ Brazil's responses to questions from the Arbitrator, question 36, para. 404.

¹⁰² Brazil's responses to questions from the Arbitrator, question 36, para. 432.

¹⁰³ US responses to questions from the Arbitrators, question 132, para. 160.

4.100 The original panel considered the meaning of the term "significant" in the expression "significant price suppression" under Article 6.3(c) and determined that "it is the degree of price suppression or depression itself that must be "significant (i.e. important, notable or consequential)"¹⁰⁴ under this provision. The panel further considered how the "significance" of a price suppression might be assessed, including in the context of the world cotton market:

"The 'significance' of any degree of price suppression may vary from case to case, depending upon the factual circumstances, and may not solely depend upon a given level of numeric significance. Other considerations, including the nature of the 'same market' and the product under consideration may also enter into such an assessment, as appropriate in a given case.

We cannot believe that what may be significant in a market for upland cotton would necessarily also be applicable or relevant to a market for a very different product. We consider that, for a basic and widely traded commodity, such as upland cotton, a relatively small decrease or suppression of prices could be significant because, for example, profit margins may ordinarily be narrow, product homogeneity means that sales are price sensitive or because of the sheer size of the market in terms of the amount of revenue involved in large volumes traded on the markets experiencing the price suppression."¹⁰⁵

4.101 The panel then considered the relative magnitude of the United States production and exports, the overall price trends in the world market and the mandatory nature of the subsidies in question and well as the available evidence of the order of magnitude of the subsidy, to conclude that it was "certainly not, by any means, looking at an insignificant or unimportant world price phenomenon".¹⁰⁶

4.102 The panel therefore did not find it necessary to specifically quantify the degree of "significance" of the price suppression at issue in order to determine that "significant price suppression" existed. Nor did it suggest that its finding was limited to a certain "portion" of the price suppression that had been determined to exist on the world cotton market. Rather, it considered the elements before it, and determined that the price suppression at issue, i.e. the price suppression caused by the subsidies under consideration on the world cotton market, was "significant". In so doing, the panel noted that the "significance" of any degree of price suppression "may not solely depend upon a given level of numeric significance" and that "[o]ther considerations, including the nature of the "same market" and the product under consideration, may also enter into such an assessment"¹⁰⁷ and that in the case of cotton, in light of the characteristics of the product and the market, "a relatively small decrease or suppression of prices could be significant".¹⁰⁸

4.103 The compliance panel concurred with the original panel's understanding of the term "significant" in "significant price suppression" in Article 6.3(c) and specifically cites the panel's conclusion in relation to the degree of price suppression that might be considered "significant" with respect to upland cotton, as cited in paragraph 4.100 above.¹⁰⁹

4.104 In light of these elements, we do not consider that it is necessary, for the purposes of assessing the impact of this "significant price suppression", to exclude in the calculation of the adverse effects a portion of the price increase said to be below an alleged threshold of "significance".

¹⁰⁴ Panel Report, para. 7.1328.

¹⁰⁵ Panel Report, paras. 7.1329-7.1330.

¹⁰⁶ Panel Report, para. 7.1332.

¹⁰⁷ Panel Report, para. 7.1329.

¹⁰⁸ Panel Report, para. 7.1330.

¹⁰⁹ Panel Report, *US – Upland Cotton (Article 21.5 – Brazil)*, para. 10.50.

The threshold of "significance" is set in order to ascertain whether the price suppression at issue is sufficiently "important, notable or consequential", as the original panel put it, to fall within the scope of Article 6.3(c) and form the basis of a finding of "serious prejudice" under Article 6 of the *SCM Agreement*. Once it is determined that the price suppression *is* significant, and therefore that it is within the scope of the provision, then it is the entirety of that existing "significant price suppression" that is the basis for the determination of "serious prejudice".

4.105 To adjust the level of price suppression downwards, for the purposes of estimating the level of countermeasures that Brazil is entitled to, would mean that we would not in fact take into account the entirety of the situation that has given rise to the findings, namely the fact that a certain degree of price suppression exists on the world cotton market, that has been found to be "significant". It is not for us to second-guess what alternative lower level of price suppression on the world cotton market might have been found not to be "significant" in the circumstances of this case. In fact, in light of the original panel's determination that the "significance" of a certain price suppression may not "solely depend upon a given level of numeric significance", we cannot even assume that a purely quantitative threshold would appropriately reflect such "significance". Indeed, the United States itself, although it considers such an adjustment to be "critical", declined to propose a specific quantitative threshold by which "significance" might be accounted for.

4.106 The Arbitrator therefore concludes that it is not required, for the purposes of estimating the effects of the significant price suppression determined to exist on the world cotton market, to adjust downwards the degree of this price suppression for "significance" (or, more correctly, "insignificance").

4.107 We also note that this is comparable, in conceptual terms, with the practice under the relevant WTO agreements in relation to the imposition of safeguards, or countervailing duties, or under the *Anti-Dumping Agreement* in relation to the imposition of anti-dumping duties reflecting the entirety of the dumping margin, where such margin is more than *de minimis*.¹¹⁰ In our view, this is conceptually similar to the reasoning we are applying to the determination of the "degree and nature of the adverse effects determined to exist". Once the existence of "significant price suppression" has been established, it is legitimate to take into account the entirety of the price suppression caused by the measures at issue on the world cotton market in assessing its impact on Brazil. A *de minimis*, or "insignificant", amount of that price suppression is not to be ignored in terms of the "remedy" which, in our case, is the countermeasure.

3. Choice of reference period

4.108 Brazil quantifies the adverse effects of marketing loans and countercyclical payments based on a counterfactual, assessing how much higher world market prices for cotton would have been pursuant to a complete withdrawal of marketing loans and countercyclical payments in MY 2005. The United States considers this period not to be representative in light of more recent evolutions on

¹¹⁰ For example, in a safeguards case, when setting the level of the duty sufficient to eliminate a serious injury, the Member applying the duty would be entitled to impose a duty reflecting the entirety of the injury, and would not be expected to impose a duty that would for example permit injury that might be material but falls short of a "serious" level. Similarly, when considering import volumes for the application of anti-dumping or countervailing duties, it would not be expected that an "initial" amount of supply up to the negligibility threshold would be exempted from application of a measure for a non-negligible supplier. Furthermore, under the *Anti-Dumping Agreement*, a margin of dumping which is less than 2 per cent is said to be *de minimis*. Dumping that is determined to be lower than this threshold will result in immediate termination of the investigation. However, if the dumping margin is found to equal or exceed this threshold, and the investigating authorities subsequently find that all other grounds for imposing an anti-dumping duty are present, the duty can be set as high as the entirety of the dumping margin. There is no requirement to reduce the anti-dumping duty by the amount of the *de minimis* threshold.

the market and proposes instead that a three-year period covering MY 2005-07 be used to calculate the amount of countermeasures to which Brazil is entitled.

(a) Arguments of the parties

4.109 The United States argues that the task of the Arbitrator is to determine the amount of countermeasures permitted based on the findings of the compliance panel and that, in this case, the Arbitrator will be making its determination over three years after the end of the reasonable period. In its view, it "makes sense that the Arbitrators use actual data of the period following the end of the reasonable period to provide more information about the likely harm to Brazil".

4.110 Brazil objects to the argument that the Arbitrator should determine the amount of countermeasures based on the findings of the compliance panel. It maintains that allowing a non-compliant Member to rely on its own failure to comply in order to limit the amount of countermeasures is inconsistent with the Article 7.9 and 7.10 of the *SCM Agreement* and Article 22 of the DSU. These provisions do not allow a non-compliant Member to extend a reference period long past the end of the implementation period to limit the scope of countermeasures.

4.111 The United States further contends that using a single year – MY 2005 – for an agricultural product that has volatile prices is not representative of the potential effects in future to Brazil.¹¹¹ The United States has presented data of the A-index from MY 1971 through MY 2007 to illustrate historical movements in world cotton prices. It argues that the A-index for MY 2007 is in line with historical A-index values while the period MY 1999-MY 2002 represents a period in which the A-index is extremely low from a historical perspective. Given that prices vary from year to year, the United States advocates the averaging of three years to smooth out the ups and downs to provide a middle ground instead of relying on any single year.¹¹²

4.112 Brazil notes that the question before the Arbitrator is whether the level of countermeasures proposed by Brazil is commensurate with the degree and nature of the adverse effects at the end of the period for implementation – and not whether the level of countermeasures is "representative of potential effects going forward".¹¹³ It then challenges the United States' assertion that MY 2005 is not representative of the "potential effects going forward to Brazil" and that the average of MY 2005 to 2007 is more representative. It provides data that shows prices, and hence in its view, effects in MY 2005 that were close to the average of the nine-year period since 1999, the first year covered by the findings of the original panel. As such, it finds MY 2005 to be representative of the per-unit amount of marketing loans and countercyclical payments over the nine-year period and hence, of their effects. In contrast, it says that prices in MY 2007 were abnormally high, and in fact, are the highest of the decade. As a result, it maintains that taking an average that includes MY 2007 prices is not "representative", and understates the amount of the subsidy and the adverse effects caused.¹¹⁴

4.113 Finally, Brazil argues that past arbitrators have used the approach that it is proposing in this dispute, i.e. using the year straddling the end of the implementation period. It claims that past arbitrations have stressed that compliance must be assessed at the time of expiry of the implementation period. It further claims that arbitrators have used reference periods longer than one year only in cases involving subsidies provided for an order of large capital goods to be delivered over a number of years.

¹¹¹ US written submission, para. 277.

¹¹² US responses to questions from the Arbitrator, question 60, para. 153.

¹¹³ Brazil written submission, para. 374.

¹¹⁴ Brazil written submission, para. 376.

4.114 The United States observes that prior arbitrations do not suggest a narrow one-year analysis. In terms of taking into account more recent data, it claims that arbitrators have taken into account current conditions – including evaluation of changes to policies at issue. The United States notes that arbitrators have also taken approaches that use multi-year time horizons, whether in projections of several years for a subsidy or in the use of formulas.¹¹⁵

(b) Analysis by the Arbitrator

4.115 Brazil has based its calculation of the amount of countermeasures that it seeks in relation to the ML and CCPs on MY 2005, and justifies the choice of that period as the year "straddling" the end of the implementation period. The United States argues that this is not "representative", and that a multi-year reference period should be used.

4.116 The question we must consider here is whether the specific period proposed by Brazil is such that it would not lead to an estimation of the adverse effects at issue that would be "commensurate with the degree and nature" of those adverse effects. We recall in this respect the fact that the burden rests on the United States to demonstrate that Brazil's proposed countermeasures do not meet this standard. In order to prevail in its argument, the United States must therefore persuade us not only that there may be alternatives to the choice of MY 2005 as the period of reference, but rather that the use of MY 2005 as period of reference would lead to countermeasures that would not be "commensurate" within the meaning of Article 7.9. The United States has not convinced us that this would be the case.

4.117 We recognize that price fluctuations on the world upland cotton market may affect the calculation of the adverse effects of the ML and CCP subsidies at issue over time. Indeed, there may be a number of economic or other factors that would affect the evolution over time of the impact of the subsidies at issue, and we do not exclude that there may have been different permissible approaches to the choice of period of reference for the purposes of such calculations. 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.

4.118 In the circumstances of this case, we find that the choice of MY 2005, 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. We note that the end of the implementation period has been chosen as period of reference in arbitrations under Article 22.6 of the DSU previously.¹¹⁶ We also find that the elements before us do not persuade us that this period would be "unrepresentative", as the United States suggests. In fact, Brazil's analysis of cotton prices (the Adjusted World price, the A-index and US farm price) shows that prices in MY 2005 were more representative, in the sense that they were close to the average of the nine-year period since MY 1999, than prices over the three-year period proposed by the United States. We concur with the significance attached by Brazil to this nine-year period since MY 1999 was the first year covered by the findings of the original panel.¹¹⁷ While the

¹¹⁵ US written submission, para. 278.

¹¹⁶ Decision by the Arbitrator, *US – FSC (Article 22.6 – US)*, para. 2.15.

¹¹⁷ See Panel Report, para. 7.1416: "In conclusion, in light of all of these considerations, we find that the effect of the mandatory, price contingent United States subsidies at issue – that is, marketing loan programme payments, user marketing (Step 2) payments and MLA payments and CCP payments – is significant price suppression in the same world market for upland cotton in the period MY 1999-2002 within the meaning of Articles 6.3(c) and 5(c) of the *SCM Agreement*."

most recent market evolutions may suggest rising prices, we have little basis to assume that this most recent trend represents a sustained medium or long-term trajectory of the market given that cotton prices vary considerably from year to year, a pattern that both parties have attested to and documented.

4.119 In light of these elements, we conclude that the United States has not demonstrated that the reference period proposed by Brazil for the calculation of its proposed countermeasures is inadequate, and we accept the use of MY 2005 as period of reference for the calculations.

4. Calculations

(a) Introduction

4.120 Brazil calculates the amount of adverse effects on rest of the world producers from US marketing loans and countercyclical payments to be US\$3.335 billion, although it only requests countermeasures equal to US\$1.037 billion annually in line with its original request to the DSB. The adverse effects are comprised of two parts. The first is the income losses by rest of the world producers on actual cotton production in MY 2005 due to suppressed world market prices ("sales value effect") which Brazil calculates amounts to US\$2.73 billion. The second is the value of the cotton production foregone by otherwise competitive producers in the rest of the world due to suppressed world market prices ("reduced production effects") which Brazil calculates at US\$604.7 million.

4.121 The United States argues that Brazil's methodology or approach to the calculations suffers from serious defects so that it should be rejected by the Arbitrator. It describes these defects as: (i) the decision not to limit the calculations of adverse effect to only the effects of US programmes on Brazil; (ii) the choices for key parameters (elasticities, coupling factor and indicator of price expectations) in the model; (iii) Brazil's use of data for a single year (MY 2005), which the United States argues is not representative of the fluctuation of marketing loan and countercyclical payments and their effects; and (iv) Brazil's failure to limit the proposed countermeasures to the portion of the effects of the marketing loan and counter-cyclical payments that resulted in the finding of inconsistency with the *SCM Agreement*.¹¹⁸

4.122 Employing the same economic simulation model submitted by Brazil but employing a different set of parameters and reference period, it calculates the "total effects" of marketing loans and countercyclical payments on Brazil to average no more US\$30.4 million annually. The United States confines its calculation only to the adverse effects on Brazil and excludes the adverse effects on other countries. Finally, it argues that the allowable countermeasures will have to be lowered further depending on the chosen threshold for "significant" price suppression. For the United States, only price suppression that breaches this threshold of being significant can be authorized for countermeasures.

4.123 Some of the issues raised by the United States which concern limiting the calculations of adverse effect to only the effects of US programmes on Brazil, limiting the proposed countermeasures to the portion of the effects of the marketing loan and counter-cyclical payments that result in the finding of inconsistency with the *SCM Agreement* and the choice of the reference period have already been considered and decided upon by the Arbitrator (see Section IV.D.1-3 above). The Arbitrator now takes up the other remaining issues.

¹¹⁸ US written submission, para. 239.

(b) Brazil's methodology and model

4.124 Brazil's methodology entails simulating a counterfactual scenario involving the permanent and anticipated removal of US cotton marketing loans and countercyclical payments. This policy change moves the world market of cotton to a new equilibrium with a new world market price and new supply and demand quantities.¹¹⁹ Based on this counterfactual scenario, Brazil calculates the percentage change in the world market price, cotton production in the United States and in the rest of the world relative to the baseline scenario where these US cotton subsidies are in place. Brazil uses the change in the world market price to establish the amount of price suppression. According to Brazil, the suppressed price in the world market for cotton in turn has two related negative consequences for cotton farmers worldwide. First, actual world production is valued at a lower price thereby resulting in income loss for farmers in the rest of the world. Second, the lower world price reduces the incentive to produce more cotton in the rest of the world, and so leads to foregone revenues from cotton production.¹²⁰ For Brazil, the sum of these two effects represents the adverse effects of the US subsidies.

4.125 To conduct this counterfactual simulation, Brazil employs what it describes as a traditional demand and supply log-linear displacement model that calculates percentage changes from an initial baseline equilibrium in which all US cotton subsidies are in place.¹²¹ The model considers two regions, the United States and the rest of the world. Brazil constructs supply and demand functions for cotton in the United States and the rest of the world. The world market for cotton is assumed to be in initial equilibrium (at which the world market price for cotton equates world demand and supply for that commodity) in which all US cotton subsidies are in place.¹²² In characterizing its model, Brazil observes that it had been considered by the compliance Panel and the Appellate Body, and both relied on its results.¹²³ It further notes that the United States had even used the model for its alternative calculations.¹²⁴

(i) *Arguments of the United States*

4.126 The United States identifies what it claims are a number of problems with Brazil's model, pointing to Brazil's choice of certain parameters such as United States and rest-of-the-world demand and supply elasticities; the coupling factor for counter-cyclical payments; and the indicator of price expectations.¹²⁵ While these are not the only problems that the United States finds with Brazil's methodology, they are the ones that it highlights and for which it provides alternatives that could be used to calculate the amount of allowable countermeasures.¹²⁶

4.127 In responding to Brazil's claim that the compliance panel had relied on the model, the United States emphasizes that the compliance panel only needed to determine whether the price suppression indicated by the model was "significant". However, the nature of the question before the Arbitrator makes the issues it has raised about the model more "sensitive" at this stage of the dispute. It believes that the task of determining countermeasures under the legal standard of Article 7.9 of the *SCM Agreement* requires that the parameters in the model be correct.

¹¹⁹ Brazil's Methodology Paper, para. 75.

¹²⁰ Brazil's Methodology Paper, para. 66.

¹²¹ Brazil's Methodology Paper, para. 74.

¹²² Brazil's Methodology Paper, para. 74.

¹²³ Brazil's Methodology Paper, para. 67.

¹²⁴ Brazil's Methodology Paper, para. 67.

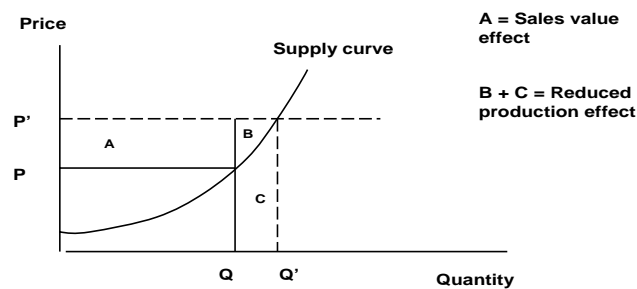
¹²⁵ US written submission, para. 251.

¹²⁶ The United States has resubmitted 'Annex I: A Review of the Simulation Analysis Presented by Dr. Sumner' which contains a more detailed critique of Brazil's model. The document was originally submitted to the compliance panel.

(ii) *Analysis by the Arbitrator*

4.128 Brazil's calculation of adverse effects from US marketing loans and countercyclical payments can be graphically represented by Figure 1. It represents the supply curve of a cotton producing country in the rest of the world. With US subsidies in place, the world price is at OP and quantity produced in the country at OQ. Without the US subsidies, the world price would be at the higher level OP' and cotton producers in the country would have responded by producing more cotton, represented here by OQ'.

Figure 1: Adverse Effects on Producers in the Rest of the World



4.129 The area **A** in Figure 1 is what Brazil terms the "sales value effect" while the sum of the areas **B** and **C** is what it terms the "reduced production effects". The Arbitrator notes that the United States has not disputed Brazil's decomposition of the adverse effects from the actionable subsidies into this sales value and reduced production effects. An alternative way of characterizing these effects can be provided using standard economic concepts. The sales value effect is the increase in producer surplus that farmers in the rest of the world would have received based on their current output of cotton had world prices been at the counterfactual (no subsidies) level. The reduced production effects are made up of two parts: the producer surplus from the additional production QQ' (area **B**) and the opportunity cost of the resources needed to produce the additional cotton (area **C**). The Arbitrator notes that if one were only interested in measuring how US cotton subsidies have reduced producer welfare in the rest of the world, then this would be represented by the loss in producer surplus (sum of areas **A** and **B**). This is because those resources used to produce QQ' of cotton would have found employment elsewhere and consequently, there would have been no loss associated with those resources to the rest of the world. However, the Arbitrator understands that adverse effects may have a wider meaning than producer surplus and that Brazil's economic analysis of adverse effects is consistent with the language of Article 6.3(c) of the *SCM Agreement*, particularly in its reference to "lost sales".

4.130 On the subject of the model proposed by Brazil, the Arbitrator determines that, for the reasons provided below, Brazil's log-linear displacement model can be used to estimate the amount of countermeasures that Brazil is entitled to for the failure of the United States to comply with the DSB ruling to remove the adverse effects of its marketing loans and countercyclical payments (or withdraw the subsidies).

4.131 First, the United States has stated that with the corrections it proposes, Brazil's model while far from perfect could be used to estimate what it terms the "total effects" from the removal of

marketing loans and countercyclical payments.¹²⁷ It is understood of course that from these estimated "total effects", the United States will require additional reductions so that they are commensurate with the adverse effects and further that they are limited only to the adverse effects on Brazil.

4.132 Second, the United States has in fact employed the model, using its own set of parameters and reference period, to calculate what the United States believes is the amount of countermeasures Brazil is entitled to. Further, the United States does not provide its own simulation model which could be employed to calculate the amount of countermeasures.¹²⁸

4.133 Finally, Brazil's model was submitted to the compliance panel which had used the simulations of the model to support its finding of non-compliance by the United States. While the Arbitrator agrees with the United States that the model was only used by the compliance panel to determine whether the price suppression caused by US cotton subsidies was "significant" and not to ascertain the exact magnitude of allowable countermeasures, its use by the panel nevertheless provides the Arbitrator with greater confidence than if the model were being submitted to it for the first time.

4.134 Needless to say, the model requires a set of parameters and inputs, such as the demand and supply elasticities, the value of the coupling factor, and an indicator of expected market prices, in order to be able to calculate the amount of adverse effects from US marketing loans and countercyclical payments. The choices for these parameters and inputs are the subject of numerous disagreements between the parties. The Arbitrator turns to each of these issues in turn.

(c) Elasticities used in the model

(i) *Long-run vs. short-run analysis*

4.135 Brazil contends that a short-run economic analysis is what is required in calculating the amount of countermeasures given that a non-compliant Member must implement adverse effects findings within six months. In Brazil's view, a Member whose subsidies are determined to cause adverse effects must, within the short period of six months, withdraw those subsidies or remove their adverse effects. Consequently, a short-term assessment is required.¹²⁹

4.136 Brazil explains that its choice of values for the demand and supply elasticities reflects the nature of the policy change that is being simulated. The policy scenario involves a large, anticipated, permanent removal of marketing loans and countercyclical payments for cotton in MY 2005 holding all other potential parameters constant.¹³⁰ It explains that the elasticities chosen for this counterfactual reflect the rational and expeditious reaction of US farmers to the policy change and the somewhat muted initial reactions of farmers in the rest of the world.¹³¹

Arguments of the United States

4.137 The United States believes that the correct way to conduct the economic modelling of the impact of the removal of marketing loans and countercyclical payments is to use long-run elasticities to allow for full adjustment to policy change.¹³² It contends that the most appropriate method of ensuring that non-compliance no longer affects decision-making by market participants is to utilize

¹²⁷ US responses to questions from the Arbitrator, question 62, para. 159.

¹²⁸ US responses to questions from the Arbitrator, question 62, para. 159.

¹²⁹ Brazil's written submission, para. 358.

¹³⁰ Brazil's written submission, para. 332.

¹³¹ Brazil's written submission, para. 356.

¹³² US oral statement, para. 11.

long-run elasticities. In its view, long-run elasticities reflect a situation in which all actors fully adjust to the policy change, thereby removing any influences of the non-compliance.¹³³

4.138 It claims that the proper question is what the price of upland cotton would be in the absence of marketing loan and countercyclical payments, not how producers and purchasers react before they have time to adjust to the lack of these payments.¹³⁴ It is because of the need for the modelling to show what the counterfactual situation looks like that a short-term, reactive approach is not appropriate. Thus, the number of months permitted for adjustment, *per se*, is not the relevant factor. In its mind, what is critical is that the counterfactual modelling shows full adjustment so that the situation with marketing loan and countercyclical payments can be compared to the situation without.¹³⁵

4.139 The United States criticizes the choice of elasticities of Brazil, claiming that in spite of Brazil's assertion that it is applying a short-run analysis, the elasticities chosen are "some type of hybrid of short run and long run."¹³⁶ It believes that this choice of elasticities dramatically inflates the effects of the US cotton subsidies.¹³⁷ In its view Brazil's choice for the US supply elasticity suggests a complete, long-run response to the change in subsidy payments and shows up in the model as a large change in US supply. By contrast, it believes other elements of the model – US demand elasticity and rest-of-world supply and demand elasticities – are lower, showing less responsiveness, as would occur in a short-run period before there is a full response to a change. Thus, in its view the magnitude of the other responses represented by these other elasticities, which would mitigate the effect of the change in US production on price, is lower. As an example, it notes that if US producers decrease production, but others increase production, the price effect of the change in US production is less.¹³⁸

4.140 The United States argues that if Brazil's counterfactual simulation assumes complete, permanent removal of marketing loan and counter-cyclical payments, and adjustment of cotton production to that change, this is consistent with a long-run scenario. In this case, the United States proposes that all the values of the elasticities be taken from the UNCTAD-FAO Agricultural Trade Policy Simulation Model (ATPSM). Employing the elasticities in that model and other assumptions about the reference period, the coupling factor and price expectations, it estimates the "total effects" of marketing loans and countercyclical payments on Brazil to average no more than US\$30.4 million annually.

Arguments of Brazil

4.141 Brazil disputes the arguments of the United States that a long-run analysis is required. In its view, the United States' argument for a long-term approach would bypass the requirement that implementation take place within six months, implying that a non-compliant Member can take a long-term approach to achieving compliance.

4.142 In addition, Brazil argues that the *SCM Agreement* (Article 7.9 and 7.10) requires that countermeasures responding to a failure to implement be "commensurate with the degree and nature of the adverse effects determined to exist". In its view, this means that countermeasures should be calculated on the basis of the entirety of the adverse effects existing in MY 2005, which are the sum of the effects of the subsidies that US cotton farmers anticipated receiving in MY 2005, and of

¹³³ US written submission, para. 254.

¹³⁴ US responses to questions from the Arbitrator, question 119, para. 109.

¹³⁵ US responses to questions from the Arbitrator, question 119, para. 110.

¹³⁶ US written submission, para. 255.

¹³⁷ US written submission, para. 256.

¹³⁸ US written submission, para. 256.

continuing effects in MY 2005 from subsidies received in previous years.¹³⁹ Consequently, it contends that it is not permissible to consider solely the change between (i) actual cotton prices and quantities in the reference period and (ii) counterfactual long-term cotton prices and quantities absent solely the subsidies anticipated in the reference period.¹⁴⁰

4.143 Furthermore, Brazil asserts that even if an assessment of the long-term effects of the subsidies at issue is adopted, the use of long-run elasticities as proposed by the United States would be flawed since market participants' full adjustments will take time. Under the short-term approach adopted by Brazil, the amount of adverse effects removed in year one is measured. At that point there remain, however, some continuing effects that will only dissipate from the market in subsequent years, resulting in a new market equilibrium at some point in the future. Thus, implementing a long-term approach requires summing up the adverse effects existing in each year of the dynamic adjustment process until the new market equilibrium is achieved. In other words, implementing a long-term approach properly requires using Brazil's short-term adjustment as the starting point and adding additional effects in subsequent years. In its view, the United States' approach only compares the starting and end point in this dynamic adjustment process, and ignores large portions of the adverse effects caused throughout the adjustment process.¹⁴¹

Analysis by the Arbitrator

4.144 The parties disagree on whether the counterfactual simulation requires a short-run or a long-run analysis. In the context of the argumentation of the parties, the concepts of short-run and long-run relate to the process of economic adjustment arising from the exogenous change in the economic environment. The long-run essentially refers to a situation where all adjustments by producers, consumers, and owners of factors of production to the given change have been completed and the market has settled down to a (long-run) equilibrium. The short-run refers to a situation, which could be one of (short-run) equilibrium, where the process of adjustment by producers, consumers and owners of factors of production has not been fully completed. This less than complete adjustment in the economy may be the result of certain rigidities in the market or simply that it takes time for producers to re-allocate resources.

4.145 To make this discussion more concrete, we relate these concepts to the specific matters under consideration in this case. The exogenous change referred to in the previous paragraph would be the elimination of marketing loans and countercyclical payments. Given that Brazil assumes a large behavioural response by US cotton farmers to this policy change, the lack of complete adjustment arises partly in the rest of the world, and partly in domestic US demand for cotton. Brazil has argued that there may be incomplete price transmission of the policy change to foreign growers of cotton.¹⁴² It has also suggested that foreign farmers lack the expertise or sophistication, have limited access to information, and face other constraints that typically afflict farmers from developing and least developed countries thus making immediate production responses more difficult.¹⁴³ Furthermore, Brazil has claimed that there are continuing adverse effects from past subsidies that need to be taken into account. It points out for example that lower cotton prices, which are the result of the actionable subsidies, have resulted in lower investment levels by rest of the world producers.¹⁴⁴ Lower than optimal investments result in relatively higher production costs, reducing present production levels. As a result of these rigidities and continuing adverse effects, foreign growers of cotton will not be able to immediately increase their plantings of cotton. Farmers in the rest of the world, who have the

¹³⁹ Brazil's responses to questions from the Arbitrator, question 119, para. 245.

¹⁴⁰ Brazil's responses to questions from the Arbitrator, question 119, para. 247.

¹⁴¹ Brazil's written submission, para. 360.

¹⁴² Brazil's written submission, para. 405.

¹⁴³ Brazil's written submission, para. 406.

¹⁴⁴ Brazil's responses to questions from the Arbitrator, question 119, para. 263.

feasibility to shift to cotton, may not immediately make the change if the increase in cotton price is not transmitted fully or if they do not believe the elimination of subsidies is permanent. Even if they do begin to cultivate more cotton, past low levels of investments will mean low productivity.

4.146 The existence of such rigidities and continuing effects means that the adverse effects of marketing loans and countercyclical payments are correspondingly greater. Producers in the rest of the world are not able to immediately and fully profit from the increase in the world price of cotton or from increased production of cotton despite the elimination of the subsidies. Using long-run elasticities, which assumes that all adjustments have been completed (or that there are no adjustment costs), will underestimate the adverse effects of the measures. The rationale for the application of a short-run analysis, and consequently of short-run elasticities, is not because of the need to capture each step of the adjustment process but because the incompleteness of adjustment implies greater costs on producers in the rest of the world.

4.147 We believe that the United States' argument for a long-run analysis may be more appropriate in cases where there are no adjustment costs. In this case it can fairly be said that these adjustment factors are due in part to the existence of the subsidies themselves. The United States is required to withdraw the subsidies or remove the adverse effects within six months. It has done neither. Brazil has established a plausible case that it will take time for consumers and producers to fully adjust to the removal of marketing loans and countercyclical payments. As we have noted in our analysis, this means that producers in the rest of the world would continue to experience the adverse effects of the subsidies even after they have been removed. Since the calculated countermeasures must be "commensurate with the degree and nature of the adverse effects determined to exist", the Arbitrator believes that the economic modelling must account for these rigidities. This makes a short-run analysis, and the use of short-run elasticities, not inappropriate for the economic modelling.

(ii) *Values of the elasticities*

US supply elasticity

4.148 The elasticity of supply measures the responsiveness of production to a change in price. The higher this elasticity, the greater the percentage increase in cotton supply for any given change in the world price of cotton.

4.149 Brazil's model uses a supply elasticity of 0.8. It justifies this choice as a reflection of the anticipations of US cotton farmers, as well as the nature of the expected short-term policy shock at issue, which will be a persistent, large-scale reduction of cotton subsidies while other non-cotton subsidies remain in place.¹⁴⁵ Given that the counterfactual scenario at issue involves a large and permanent loss of revenue to only US cotton farmers, it believes that those farmers will necessarily adjust faster and more significantly than farmers reacting to temporary and transient reductions in revenue.¹⁴⁶ It contends that this is unlike the policy simulations usually considered in computable general equilibrium models which involve an across-the-board removal of all farm subsidies.¹⁴⁷ In Brazil's view, with US cotton farmers' revenues expected to decline dramatically following the withdrawal of marketing loans and countercyclical payments, they will have strong and immediate incentives to switch to alternative crops because there is nothing to gain (and much to lose) from deferring a production reaction.¹⁴⁸

¹⁴⁵ Brazil's Methodology Paper, para. 99.

¹⁴⁶ Brazil's Methodology Paper, para. 101.

¹⁴⁷ Brazil's Methodology Paper, para. 101.

¹⁴⁸ Brazil's written submission, para. 404.

4.150 The United States disagrees that a value of 0.8 for the US supply elasticity correctly reflects a short-run analysis; rather such a value is in fact a long-run supply elasticity. In its view, Brazil's characterization of the policy counterfactual as a large and permanent loss of revenue to US producers, and the possibility of US producers taking the significant step of exiting cotton farming altogether in response to the United States' withdrawal of subsidies, are events usually associated with a long-run scenario.¹⁴⁹ It emphasizes that Brazil's assumption that US producers would be able to fully adjust to the permanent change in US policy within the terms of the model implies a long-run perspective.

ROW supply elasticity

4.151 Brazil's model employs a value of 0.2 for the rest of the world supply elasticity. Brazil claims that the rest of the world supply elasticity must necessarily be smaller in magnitude than the US supply elasticity. This is because of the adaptation by rest of the world producers to a policy shock that is: (i) indirect, (ii) relatively small compared to the revenue loss faced by US producers, and (iii) in the opposite direction from that faced by US producers. It claims that transmissions of world market price movements into local price changes in local currencies relevant for non-US farmers can be slow and incomplete due to barriers such as market institutions, centralized crop marketing, government policies, limited information, and high per-unit transport costs.¹⁵⁰ Further, it contends that lagged price adjustments, the lack of expertise or sophistication, restricted access to information, as well as other constraints affecting especially developing and least developed country farmers make immediate production responses more difficult.¹⁵¹

4.152 While the United States acknowledges that price changes may not fully be transmitted in the short-run, it believes that this is less the case in the long-run and, that in any event, it does not mean that producers in the rest of the world never fully adjust to policy change. It claims that in some countries where farmers typically work on small farms and additional land is available, such as India and Pakistan, farmers will likely adjust to such changes in policy without delay.

4.153 It also disputes Brazil's claim that foreign suppliers would be slow to respond because they would be unable to distinguish whether the change in prices was a temporary market condition or a change in US policy. The United States believes this argument lacks any foundation given the continuous press coverage and major cotton producing states' focus on the impacts of the US programmes.

Demand elasticities

4.154 The elasticity of demand measures the responsiveness of consumption to a change in price. The higher this elasticity, the greater the percentage increase in cotton demand for any given percentage change in the world price of cotton.

4.155 Brazil's model employs a value of -0.2 for the US and ROW elasticities of demand for cotton. Brazil claims that cotton demand is mainly determined by end consumers and that their demand is relatively inelastic with respect to changes in cotton prices for a number of reasons. First, Brazil claims that consumers have a preference for cotton over synthetic fabrics. Second, it asserts that the cost of raw cotton only makes up a small share of the final price of textile products. Thus, it concludes that consumers worldwide respond little to changes in the price of raw cotton, since the impact of such changes on the relative price of retail textile products is limited. As for demand from

¹⁴⁹ US written submission, para. 258.

¹⁵⁰ Brazil's written submission, para. 405.

¹⁵¹ Brazil's written submission, para. 406.

cotton mills, it claims that this is characterized by inelastic demand, not least because mill technology favours the use of particular fibres.

4.156 Brazil contends that the values of the elasticities are conservative relative to recent studies in agricultural economics and consistent with the empirical and econometric literature. Comparing the chosen values with other studies or models, it maintains that they are equal to the weighted average of the demand elasticities in the Iowa State CARD international cotton model, twice the magnitude of the demand elasticity parameter used by Goreux, and four times the magnitude of the demand elasticity parameter used by ICAC in their studies.

4.157 The United States disputes Brazil's claim that cotton demand is mainly determined by final consumers. It argues that actual demand for cotton is at the mill, where the cost of cotton accounts for nearly 70 per cent of mill production costs. Additionally, it asserts that it is the mills that decide the mix of fibres in producing yarn and therefore the mix is affected by relative prices of available fibres.

4.158 The United States objects to Brazil's choice of US and ROW demand elasticities as being near the lower bound of that found in the literature on studies looking at impact of the removal of US cotton programmes. It judges the premise of very inelastic demand as being doubtful even in the short-run. And in the long-run, it argues that cotton mills will adjust their use of cotton even more. In the light of the type of significant shock that Brazil posits in its counterfactual, the United States believes such adjustment would be expected. And it points to the changes that the global financial crisis and economic slowdown have caused with the demand for cotton demand declining significantly.

4.159 It also contends that if a short-run analysis is to be employed, cotton stocks must be accounted for. It claims Brazil's model does not account for stocks and one method to incorporate stocks is through adjusting the demand elasticity.¹⁵²

Analysis by the Arbitrator

4.160 Brazil has proposed a set of elasticities to conduct its counterfactual analysis (see Table 1). Although the United States has argued for the appropriateness of a long-run analysis and the use of long-run elasticities, it has also proposed an alternative set of values of short-run elasticities based on the FAPRI model.

Table 1: Values of short-run elasticities proposed for simulating the removal of marketing loans and countercyclical payments

Parameter	Brazil	United States
US cotton supply elasticity	0.80	0.21
ROW cotton supply elasticity	0.20	0.33
US demand elasticity	-0.20	-0.82
ROW demand elasticity	-0.20	-0.39

4.161 In the Arbitrator's view, Brazil needs to show that there is support to be found in the research literature for the values of the US and ROW elasticities that it has proposed to employ in the simulations. The Arbitrator had requested both parties to review this literature for estimates of cotton

¹⁵² US comments on Brazil's responses to questions from the Arbitrator, question 121, para. 156.

demand and supply elasticities and both parties have provided their reviews to the Arbitrator.¹⁵³ The Arbitrator has assembled part of this information in Tables 2A-D which show the values of the short-run elasticities from the economic literature. In their response to the Arbitrator, the parties sometimes did not indicate whether the elasticity was short-run or not. What appears in Tables 2A-D are only those values explicitly described as short-run by the parties.

Table 2A: Survey of values of short-run US supply elasticities

Author	Value of Elasticity	US Region	Supply Response
FAPRI	0.18	Delta	Acreage
	0.11	Southeastern	Acreage
	0.237	South Plains	Acreage
Lin	0.586	Southeast and Delta	Acreage response
	2.282	South Plains	Acreage response
Adams	0.9	Southeast and Delta	Acreage response
	0.797	South Plains	Acreage response
Meyer	0	US (National)	Area harvested
Pan, Mohanty et al	0.18	Delta	Acreage response
	0.16	Southeast	Acreage response
	0.31	Southwest Irrigated	Acreage response
	0.37	Southwest Dryland	Acreage response
	0.42	West	Acreage response
CARD (Babcock)	0.21	US (National)	-

Table 2B: Survey of values of short-run ROW supply elasticities

Author	Value of Elasticity	Region	Supply Response
Meyer	0.01	Rest of world	Area harvested
Pan, Mohanty et al	0.1	Rest of world	Acreage response
	0.54	Rest of world	Acreage response
Orden, Salam, Dewina, Nazli and Minot	0.3	Pakistan	-
Babcock et al	0.2	Rest of world	-
Fang and Babcock	0.2	Rest of world	-
FAPRI	0.33	Rest of world	-

¹⁵³ Brazil's responses to questions from the Arbitrator, question 5, paras 15-83 and US responses to questions from the Arbitrator, question 5, paras. 22-30.

Table 2C: Survey of values of short-run US demand elasticities

Author	Value of Elasticity	Demand by
Meyer	-0.256	Mills
Babcock et al	-0.82	-
FAPRI	-0.82	-

Table 2D: Survey of values of short-run ROW demand elasticities

Author	Value of Elasticity	Demand by
Babcock et al	-0.2	-
Fang and Babcock	-0.2	-
FAPRI	-0.39	-

Sources: Brazil's responses to questions from the Arbitrator, question 5, paras. 15-83 and US responses to the questions from the Arbitrator, question 5, paras. 22-30.

4.162 Tables 2A-D provide support for Brazil's proposed elasticity values, although the Arbitrator is of the view that this is not by any means overwhelming. The US supply elasticity adopted by Brazil is in the upper end of the distribution. There is far less literature on cotton demand elasticities and the estimates shown in Tables 2A-D tend to take the competing values claimed by the parties.

- **US Supply Elasticity:** The lowest estimate is provided by Meyer with a value of zero. The largest values are from the studies by Adams (0.8 to 0.9) and by Lin (0.59 and 2.28) which provide support for Brazil's choice. The FAPRI, Pan, Mohanty et al and Babcock et al studies have elasticities that, averaged at the national level, will range between 0.2 and 0.25.
- **ROW Supply Elasticity:** The elasticities range from near zero (Meyer) to 0.54 (Pan, Mohanty, et al). Two studies (Babcock et al and Fang and Babcock) use Brazil's value of 0.2.
- **US Demand Elasticity:** Three studies are reported in Table 2C with only the Meyer study providing support for Brazil's proposed value of -0.2. However, we note that this estimate is of mill demand, which was the subject of much of the US criticism against Brazil's proposed value.
- **ROW Demand Elasticity:** Only three studies are reported in Table 2D and two of them (Babcock et al and Fang and Babcock) use identical values as Brazil.

4.163 On the basis of the Arbitrator's determination that a short-run analysis is appropriate for the economic modelling and the finding, based on the review of the literature provided by the parties, that econometric estimates and other modellers have employed the elasticity values proposed by Brazil, the Arbitrator determines that the values proposed by Brazil are available and not unsuitable to be used in the economic modelling.

(d) Coupling factor

4.164 Brazil's model assigns to each cotton subsidy programme a "coupling factor" which indicates the degree of production incentive that a particular programme has on US cotton farmers relative to revenue from the market. Unlike marketing loan subsidies, which are based on current production,

countercyclical payments are paid on the basis of a farm's historical base area and historical programme yield. This suggests that payments under the programme will give less of a production incentive than marketing loans. While Brazil uses a coupling factor of one for marketing loans, it employs a coupling factor of 0.4 for countercyclical payments.

(i) *Arguments of the United States*

4.165 The United States disagrees with Brazil's choice of 0.4 for the coupling factor. The United States proposes to follow what it states is "the FAPRI approach of modelling these payments with a coupling factor of 0.25."¹⁵⁴

4.166 The United States disputes the claims made by Brazil that countercyclical payments allow US cotton farmers to take on greater business risk and that such payments provide US cotton farmers additional income that can be used to get commercial credit for further productive investments. The United States claims that Brazil's claim would apply to any additional income that these farmers received, whether it be income support not tied to production or off-farm income.

4.167 The United States disagrees with Brazil's claims that farmers expect that payment acres would be updated in the next farm bill resulting in them planting cotton now to ensure larger acreage for the next farm bill. It argues that the original panel stated that there was no evidence before it regarding farmers' expectations relating to base updating, and the Appellate Body agreed with the panel's determination not to find such expectations. It also notes that the compliance panel had the understanding that the issue of base acreage updating was not before it. Further, it claims that with the enactment on 18 June 2008 (effective 22 May 2008) of the "2008 Farm Bill", farmers would have no basis for an expectation of cotton base updating today.

4.168 The United States contends that data on planting show that farmers holding cotton base acres widely plant crops other than cotton and as such are inconsistent with Brazil's argument that legal restrictions on land use under the FSRI Act of 2002 undermine farmers' flexibility to switch to alternative crops. It also points to the shift in the production on farms holding cotton base acres. When faced with relative prices that favoured the planting of another crop, when agronomic conditions are favourable, it states that US cotton producers have responded in a significant way.

4.169 The United States has referred to three new studies on the production effects of countercyclical payments published since the compliance panel proceedings. It acknowledges that as was the case with the studies submitted during the compliance panel proceedings, none of the new papers deal directly with the impact of countercyclical payments for cotton on production. The United States argues that studies nevertheless show that countercyclical payments have a relatively small production impact.¹⁵⁵ It adds that as with many studies about decoupled payments, where authors find positive production effects, such effects are small, difficult to quantify, and subject to many qualifiers.¹⁵⁶ Table 3 summarizes the United States' analysis of these studies.

¹⁵⁴ US written submission, para. 274.

¹⁵⁵ US responses to questions from the Arbitrator, question 6, para. 31.

¹⁵⁶ US responses to questions from the Arbitrator, question 6, para. 38.

Table 3: US analysis of studies about countercyclical payments

Study	US Analysis
Bhaskar and Beghin study	This is a survey of research on decoupled payments, including countercyclical payments. The United States then cites the conclusions from several studies reviewed in this paper that specifically examined countercyclical payments. It states that the paper by Anton and Le Mouel shows a small risk reducing effect from countercyclical payments. It claims that the paper by Makki, Johnson and Somwaru shows larger production effects but this is because of certain assumptions, especially about base updating, which have not materialized thus throwing doubt on the conclusions. It contends that the paper by Beckman and Wailes suggests very high production effects for rice but the United States argues that there are significant problems with the estimations for countercyclical payments that call into question the validity of these results.
Anderson, Coble and Miller study	The United States quotes the abstract of the paper which states that: "This research evaluates whether the introduction of countercyclical payments creates an incentive for program crop producers to hedge the expected government payment using futures and/or options. Results indicate that some level of countercyclical payment hedging is optimal for risk-averse decision makers. However, optimal hedge ratios depend on planting time expectations of marketing year average price as well as on what crop, if any, has been planted on countercyclical payment base acres. These results suggest that the ability to hedge may make these payments more decoupled but also illustrate the distortion of producer behaviour induced by farm programs."
Coble, Miller and Hudson study	This study reports analysis of the subjective expectations of producers for base updating and an analysis of the effect these expectations have on producer willingness to accept a buyout of the right to update. The United States quotes one passage from the study which it believes has some bearing on this subject: "Interestingly, more producers think countercyclical payment rates will decline than believe marketing loan rates will decline. As a reviewer noted, producers may perceive the loan program with its link to production to be a more essential program than a program decoupled from production, and therefore believe it less likely to be eliminated."

4.170 The United States has also reviewed the Beckman and Wailes study analysed by Brazil. The United States claims that countercyclical payments for rice have been erratic and variable, and in some years zero.¹⁵⁷ Since Brazil dismisses some studies offered by the United States that use data for commodities such as corn and wheat (the study by Anton and Le Mouel), stating that they are not relevant because these products have not regularly received countercyclical payments, then the United States argues that the Beckman and Wailes study should be similarly dismissed.

¹⁵⁷ US responses to questions from the Arbitrator, question 130, para. 150.

(ii) *Arguments of Brazil*

4.171 In response to the criticisms of the United States, Brazil provides an analysis of how countercyclical payments can increase production. It contends that countercyclical payments increase farmers' wealth, reducing risk aversion and increasing the planting of cotton.¹⁵⁸ It believes that the presence of countercyclical payments allows credit-constrained farmers to finance investments in land, equipment, and in the purchase of farm inputs, making production more efficient.¹⁵⁹ It claims that farmers may be willing to produce more output since countercyclical payments, which vary with the market price, reduce revenue risk.¹⁶⁰ It professes that countercyclical payments contribute to covering fixed costs, allowing marginal farmers to avoid exiting cotton production.¹⁶¹

4.172 The possibility that base yields and base acres, which determine the amount of CCP subsidies, would be updated in the 2008 Farm Bill is another factor cited by Brazil as supporting the choice of a coupling factor of 0.4. It argues that if farmers believe that future payments are based on current production, because of the possibility of updating base acres, they may increase the current production of those crops for which they expect to receive future payments.¹⁶² Brazil admits that this updating did not materialize with the 2008 Farm Bill but it claims that this is beside the point as what matters for current production is whether farmers expected base updating to occur.¹⁶³

4.173 Brazil has also responded to the review of the literature on the production effects of countercyclical payments provided by the United States.¹⁶⁴ Table 4 summarizes its analysis of the studies.

Table 4: Brazil's analysis of studies about countercyclical payments

Study	Brazil's Analysis
Beckman and Wailes study	Brazil claims that the authors find significant production-enhancing effects of countercyclical payments for rice, which is the only crop other than cotton which has received significant countercyclical payments. It states that two models were run with the second model finding that "as [per hundredweight] counter-cyclical payments increase a dollar for the year, area harvested increases 956.29 thousand acres." It characterizes this result as significant since this acreage represents almost one third of US rice production. The implied coupling factor in this study is greater than 1.0.
Anton and Le Mouel study	This study suggests that risk-reducing effects of countercyclical payments for sorghum, corn and wheat are small. However, Brazil argues that all three of these crops have received little or no countercyclical payments prior to the date of the study (year 2004). Thus in its view, the results of this study are not relevant to the issue of the cotton CCP coupling factor.

¹⁵⁸ Brazil's written submission, para. 411.

¹⁵⁹ Brazil's written submission, para. 411.

¹⁶⁰ Brazil's written submission, para. 412.

¹⁶¹ Brazil's written submission, para. 412.

¹⁶² Brazil's written submission, para. 412.

¹⁶³ Brazil's written submission, paras. 416-417.

¹⁶⁴ Statement by Professor Daniel Sumner concerning adverse effects under Article 7.9 of the *SCM Agreement*, Exhibit Bra-803, paras. 27-32.

Study	Brazil's Analysis
Makki, Johnson and Somwaru study	The study analyses the effects of countercyclical payments on income variability for Minnesota farms. Brazil states that Minnesota grows primarily corn and wheat, but no cotton. Brazil suggests that the results of the study indicate that farmers may increase acreage of crops with higher CCP rates, especially if base updating is allowed, as it was under the 2002 FSRI Act.
Coble, Miller and Hudson study	Brazil describes the study as indicating that cotton farmers anticipated a significant chance of an update of the CCP subsidy base acres and yields and, based on that anticipation, in fact, increased their plantings and production.
Anderson, Coble and Miller study	Brazil concludes that the study finds a strong incentive to plant the cotton base crop implying significant supply effects from the CCP subsidy.

4.174 Based on this analysis, Brazil concludes that contrary to the United States response to the Arbitrator's questions, the economic studies cited by the United States lend support to a coupling factor of 0.4 for cotton.¹⁶⁵ Furthermore, Brazil asserts that the weight of the economic literature continues to confirm significant supply effects from countercyclical payments for cotton.¹⁶⁶

(iii) *Analysis by the Arbitrator*

4.175 The Arbitrator understands that there is no dispute between Brazil and the United States that countercyclical payments can have a production effect. There are a number of possible ways that the payments can affect production. Since countercyclical payments vary inversely with the market price of cotton, they have the effect of stabilizing revenues and reducing the risk to cotton farmers. The payments can alleviate credit constraints enabling more purchases of inputs. The availability of the payments would have allowed farmers to cover fixed costs and may have allowed more farmers to continue with cotton farming. To the extent that farmers anticipated the possibility of updating base acres, it would have provided an incentive to increase plantings. These have been described in Brazil's recapitulation of previous decisions made by the original panel, the compliance panel and the Appellate Body.

4.176 The fact that the United States proposes to use a coupling factor of 0.25 and not zero attests to its view that the payments have a production effect. Where the parties disagree is how large the production effects of the payments are. But even here, it does not appear that they are too far apart. The United States believes that a dollar of countercyclical payment to US cotton producers generates a production incentive equivalent to an increase in the market price by 25 cents while Brazil believes it generates a production incentive equivalent to a 40 cent rise in the market price of cotton.

4.177 The Arbitrator notes that unlike the demand and supply elasticities that are also the subject of disagreement between the parties, there is hardly any econometric literature that estimates the value of the "coupling" factor for countercyclical cotton payments. The Arbitrators did ask the parties to review any new economic research on the production effects of countercyclical payments that had appeared since the compliance panel. Both Brazil and the United States have done so. These do not directly provide estimates of the coupling factor for cotton, but in examining empirically how much

¹⁶⁵ Statement by Professor Daniel Sumner concerning adverse effects under Article 7.9 of the *SCM Agreement*, Exhibit Bra-803, para. 23.

¹⁶⁶ Statement by Professor Daniel Sumner concerning adverse effects under Article 7.9 of the *SCM Agreement*, Exhibit Bra-803, para. 33.

the production effects of these payments are, they have an important bearing on the question before the Arbitrator.

4.178 The Arbitrator does not necessarily disagree with the assessment of the United States that these studies do not allow a conclusive assessment to be made about the exact magnitude of the coupling factor.¹⁶⁷ The studies have been done for different crops, using different data sources, and different methods and assumptions.¹⁶⁸ For every study that finds a large production effect, one is able to offer another study that finds a negligible effect. For one crop where one finds a given production effect, whether small or large, it is always possible to provide some mitigating circumstance why the results can or cannot be applied to cotton. But there is certainly a theoretical presumption, shared by both Brazil and the United States, that the payments affect production decisions. Furthermore, and as Brazil has pointed out, the review of the economic literature suggest that countercyclical payments not only have production effects but, under certain circumstances, can have substantial production effects.¹⁶⁹ Accordingly, the Arbitrator determines that a value of 0.4 for the coupling factor as proposed by Brazil is within the range found in the relevant literature and is not inappropriate.

(e) Price expectations

4.179 As both Brazil and the United States have explained, cotton farmers typically make their planting decisions around late winter and early spring (Brazil claims it is in February while the United States claims that it is in April). But most cotton is marketed in December so how much cotton farmers will plant depends on what they believe cotton prices will be in December. The simulation model employed by Brazil therefore requires some indicator of farmers' expectations about the market price. Brazil uses the one-year lag of farm gate prices as its indicator of farmers' market price expectations. It claims that this approach is standard procedure in the modelling literature.¹⁷⁰

4.180 Since marketing loans and countercyclical payments vary with cotton prices, farmer's expectations of market prices also trigger expectations how much of these subsidies they will receive. In Brazil's model, the expected revenue per unit of cotton then is made up of the expected market price and what Brazil terms the expected "effective per-unit revenue received from government subsidies".¹⁷¹ As Brazil describes it, this second term is not simply the per-unit revenue from government subsidies to US cotton farmers but reflects the degree to which these subsidies provide an incentive for production relative to the incentive created by market prices.¹⁷² Finally, Brazil calculates the effective per-unit revenue received from government subsidies as the product of the per-unit government support from all subsidies and the overall coupling factor, the weighted average of all production incentives yielded by all subsidies.¹⁷³

(i) *Arguments of the United States*

4.181 The United States argues that Brazil provides no evidence that farmers make their planting decisions based on last year's market prices. The United States believes that the futures price provides for a better measure of price expectations than the previous year's market price. In its view, the futures price incorporates the latest information available and is the result of market participants' views. It contends that the use of futures prices employ data from a real-world market in which

¹⁶⁷ US responses to questions from the Arbitrator, question 130, para. 152.

¹⁶⁸ US responses to questions from the Arbitrator, question 130, para. 150.

¹⁶⁹ Brazil's comments on US responses to questions from the Arbitrator, question 130, para. 357.

¹⁷⁰ Brazil's Methodology Paper, para. 112 and footnote 131.

¹⁷¹ Brazil's Methodology Paper, para. 78.

¹⁷² Brazil's Methodology Paper, para. 79.

¹⁷³ Brazil's Methodology Paper, para. 80.

economic actors, such as farmers and merchants, come together and engage in market price discovery.¹⁷⁴

4.182 For the relevant value of the futures price, the United States used the average for January-March futures for December delivery. To derive the expected annual farm price, it also deducted 5 cents from this average. The United States explains that this deduction is necessary to adjust the futures price to the particular quality of a grower's cotton and to include costs for delivery to the grower's geographic location. While the futures market is the best barometer of the value of the cotton, that price corresponds to a particular quality and location.¹⁷⁵ It claims that data from 2001 through 2007 show that the basis, defined as New York December futures minus average farm price, for the months of October-December average between 4 and 5 cents consistently regardless of the period to generate the average.¹⁷⁶

(ii) *Arguments of Brazil*

4.183 Brazil has indicated that it has no strong general preference for using the lagged price or the futures price in the simulation. It acknowledges that both futures market prices and lagged prices are prone to similar errors as predictors for prices and subsidy revenues in the upcoming marketing year. In some years and in times of rapid and significant market changes, it states that past prices may be a poor reflection of prices for the following season. In that case, it believes that futures market prices might be a more appropriate indicator for measuring farmers' price and subsidy expectations. It points out that for MY 2005, choosing between the two does not result in any substantial difference in price effects simulated by its model. Thus it recognizes that there is no substantive difference in results between using futures market prices or lagged prices as the basis for price expectations.¹⁷⁷

4.184 However, it disputes the manner in which the United States has made adjustments to futures prices, which involves deducting a 5 cents basis from the futures market price to derive the expected season average US farm price. Brazil argues that the root mean square error of a simple regression of the futures market price is – as it must be – lower than the root mean square error of an additive basis approach to using the futures market price. Thus, *a priori*, it believes there is a strong reason to prefer the regression approach.¹⁷⁸ Furthermore, it claims that there are flaws in the US calculations leading to the 5 cent basis. If only the adjustment for quality and location were relevant, it contends that this would involve calculating the basis between (i) the average December quote of the December contract and (ii) the December price received by farmers. But Brazil points out that the United States has included data from October and November which it argues distorts the calculation. Using an alternative set of publicly available data, and a different time period than that selected by the United States, it arrives at a basis of 7.5 cents.¹⁷⁹

4.185 In Brazil's view, the result of the 5 cent deduction made by the United States to the futures price is to introduce an upward bias in the expected market price and a significant understating of the subsidy payments.¹⁸⁰ Also, Brazil claims that the alternative simulation performed by the United States using Brazil's model and utilizing future prices was improperly done.¹⁸¹ Together, it

¹⁷⁴ US written submission, para. 275.

¹⁷⁵ US responses to questions from the Arbitrator, question 131, para. 154.

¹⁷⁶ US responses to questions from the Arbitrator, question 131, para. 155.

¹⁷⁷ Statement by Professor Daniel Sumner concerning adverse effects under Article 7.9 of the *SCM Agreement*, Exhibit Bra-803, para. 4.

¹⁷⁸ Brazil's comments on US responses to questions from the Arbitrator, question 131, para. 368.

¹⁷⁹ Brazil's comments on US responses to questions from the Arbitrator, question 131, para. 372.

¹⁸⁰ Statement by Professor Daniel Sumner concerning adverse effects under Article 7.9 of the *SCM Agreement*, Exhibit Bra-803, para. 7.

¹⁸¹ Statement by Professor Daniel Sumner concerning adverse effects under Article 7.9 of the *SCM Agreement*, Exhibit Bra-803, para. 9.

contends that these biases would lead to a significant decline in the calculated amount of price suppression.¹⁸²

(iii) *Analysis by the Arbitrator*

4.186 Both parties have acknowledged that there are various indicators and methods that can be used to estimate farmers' market price expectations, including futures prices and lagged prices. Brazil has in fact even stated that it has no strong general preference for using the lagged price or the futures price in the simulation.

4.187 The Arbitrator requested the parties to provide calculations of the root mean square error (RMSE) of forecasts using either the lagged price or the futures price. They were also requested to provide the data used in the calculations. The root mean square error is a statistic that is often used to judge how well a particular indicator performs in forecasting some variable.¹⁸³ The lower the RMSE, the better the indicator is as a tool for forecasting the variable of interest. Brazil provided data covering the period from 1960 to 2005 but data on February futures for December deliveries are available only from 1975 onwards. The United States submitted data from 1985 to 2007 using average January to March futures prices for December deliveries.

4.188 The results of the calculations of the root mean square error of the forecasts are shown in Table 5. The parties have used two types of indicators. One is simply the variable itself (lagged farm price or futures price). The second is the fitted value of the variable based on a regression of the farm price on either the lagged price or the futures price. To make the results comparable, two periods have been chosen corresponding to the futures price data submitted by the parties: 1975-2005 and 1985-2007. The data and calculations are shown in Annex 1.

4.189 The table shows that farmers will obtain better forecasts (in terms of lower RMSE) if they use the fitted value of the futures price, whether February futures or the average of January to March futures prices. In general, the root mean square error of the fitted futures price is lower than that of the fitted lagged price, although the difference is not particularly large.

4.190 Furthermore, the lagged price is not observed by farmers when they make their planting decisions in February-April.¹⁸⁴ The cotton marketing year starts from 1 August of the calendar year and ends on 31 July of the following year. So to take an example, the 2008 marketing year covers the period 1 August 2008 to 31 July 2009. The lagged price will be the average cotton price of 1 August 2007 to 31 July 2008. Thus, when farmers begin planting in February-April 2008, they will not have yet observed the lagged price. The lagged price actually contains information that extends several months beyond the period when farmers make their planting decisions. In contrast, the futures price is known to farmers when they make their planting decisions in February-April.

¹⁸² Statement by Professor Daniel Sumner concerning adverse effects under Article 7.9 of the *SCM Agreement*, Exhibit Bra-803, para. 10.

¹⁸³ The root mean square error (RMSE) is defined as: $RMSE = \sqrt{\sum_{i=1}^T (p_t - {}_{t-1}p_t^e)^2 / T - k}$. Here

p_t is the price of cotton at time t and ${}_{t-1}p_t^e$ is the forecast of the cotton price, with the expectations formed one period before at $t-1$. T is the total number of marketing years and k is the number of regressors, including the constant term.

¹⁸⁴ US responses to questions from the Arbitrator, question 61, para. 155.

Table 5: Root measure square error (RMSE) of various indicators of cotton price expectations

Indicator of expectations	RMSE
Period: 1975-2005	
Lagged farm price	10.58
February futures	11.64
Regression on lagged farm price	9.16
Regression on February futures	8.81
Period: 1985-2007	
Lagged farm price	10.46
Jan-March futures	11.08
Regression on lagged farm price	9.52
Regression on Jan-March futures	9.21

Sources: Exhibit Bra-770; US responses to questions from the Arbitrator, question 7, para. 39.

4.191 Given that the root mean square error of the fitted futures price is lower than that of the fitted lagged price, and that when farmers make their planting decision in February-April they would have observed the futures price but not the lagged price (the price of the previous marketing year), the Arbitrator resolves that the futures price better represents farmers' expectation of the price of cotton.

4.192 In implementing this change in the calculations, the Arbitrator has utilized Brazil's Annex I submission to the compliance panel.¹⁸⁵ This contains the results of Brazil's regression approach to determining the expected price as well as the price contingent payments (Step 2, marketing loans and countercyclical payments). The results of the Arbitrator's own analysis of various indicators of market price expectations strongly support the regression-based approach, since it produces the lowest root mean square error. Deducting a constant basis from the futures prices will not change the conclusion. As Brazil has observed, the root mean square error of a simple regression of the futures market price will be lower than the root mean square error of an additive basis approach to using the futures market price. The Arbitrator has also used the updated data provided by Brazil in Worksheet 6 of Exhibit Bra-704. In so doing, the Arbitrator has imposed the constraint that expected CCP payments should not be higher than 13.73 cents per pound.¹⁸⁶

(f) Conclusions

4.193 On the basis of these determinations, and previous findings made in Section IV.D.3 of this Decision about the reference period (MY 2005), the Arbitrator has rerun Brazil's model. Expected prices as well as subsidy payments were based on regressions on futures prices. For MY 2005, the Arbitrator calculates that the world price would have been higher by 9.38 per cent but for US marketing loans and countercyclical payments. The adverse effects on the rest of the world from US marketing loans and countercyclical payments in MY 2005 amounted to **US\$2.905 billion**. This is comprised of sales value effects of US\$2.384 billion and reduced production effects of US\$521.5 million.

¹⁸⁵ Annex I, Brazil's first written submission to the Panel, *United States – Subsidies on Upland Cotton: Recourse by Brazil to Article 21.5 of the DSU*.

¹⁸⁶ Countercyclical payments are paid whenever the effective price of the commodity falls below the target price, which is fixed by the FSRI Act of 2002 at 72.4 cents per pound for upland cotton. The effective price for cotton is the sum of the direct payment rate (6.67 cents per pound), plus the higher of the national average farm price for the marketing year or the loan rate (52 cents per pound). More precisely, $CCPCotton = 72.4 - (6.67 + \text{Max}(\text{national average farm price}, 52))$. Thus countercyclical payments for cotton cannot exceed 13.73 cents per pound. This maximum is triggered whenever the national average farm price falls below 52 cents per pound. See also footnote 12 of Statement by Professor Daniel Sumner concerning adverse effects under Article 7.9 of the *SCM Agreement*.

4.194 In Section IV.D.2 above, the Arbitrator further determined that once the existence of "significant price suppression" has been established, it is legitimate to take into account the entirety of the price suppression caused by the measures at issue on the world cotton market in assessing its impact on Brazil. Accordingly, the level of countermeasures should not be limited to those adverse effects that render the subsidy actionable under the *SCM Agreement*. Thus, the amount of **US\$2.905 billion** which was determined to be the amount of adverse effects to the rest of the world from US marketing loans and countercyclical payments need not be revised downwards.

4.195 However, the Arbitrator has also determined that this amount needs to be apportioned to Brazil (Section IV.D.1). Brazil's share of cotton production in the rest of the world was **5.1 per cent** in MY 2005.¹⁸⁷ After making this apportionment, the Arbitrator therefore finds that the amount of countermeasures that are commensurate with the degree and nature of the adverse effects determined to exist is **US\$147,314,091 (US\$147.3 million)**. The detailed calculations and data appear in Annex 2.¹⁸⁸

V. BRAZIL'S REQUEST TO APPLY COUNTERMEASURES UNDER THE TRIPS AGREEMENT AND THE GATS

5.1 In its request to the DSB, Brazil requests authorization to suspend concessions or other obligations in the annual amount of US\$1.037 billion with respect to certain actionable subsidies. In its view, given the amount, it is neither practicable nor effective for Brazil to suspend concessions only on imports of US goods and the circumstances are serious enough to justify the suspension of concession or obligations under other covered agreements. Brazil therefore proposed to suspend obligations under GATT 1994, and also under the GATS and the TRIPS Agreement under Article 22.3(c) of the DSU.¹⁸⁹

5.2 The United States challenges this request, arguing that Brazil had not followed the procedures and principles of Article 22.3 of the DSU. The United States argues that given the size and diversity of the Brazilian economy, Brazil cannot justify and demonstrate its claim that applying countermeasures with respect to goods is not practicable or effective.¹⁹⁰ In these proceedings, however, Brazil argued that the provisions of Article 22.3 of the DSU do not apply, and that its request must be considered on the basis of Article 7.9 of the *SCM Agreement* only.

5.3 In light of the parties' disagreement as to the applicable legal standard for this part of our assessment, we must first consider whether the principles and procedures of Article 22.3 of the DSU apply, before we can proceed with an assessment of Brazil's request on the basis of the applicable legal standard.

¹⁸⁷ The market share is calculated from data in Exhibit US-68, Worksheet "Production".

¹⁸⁸ Annex 2 is based on Exhibit Bra-704. Worksheets 6 and 7 of Annex 2 have been substantially revised as futures prices (or regressions thereof) are used as the basis for expectations of the market price and subsidy payments. They are derived from Exhibit Bra-17 (Annex I), which was originally submitted to the compliance panel.

¹⁸⁹ WT/DS267/26.

¹⁹⁰ US written submission, paras. 318-319.

A. DO THE PRINCIPLES AND PROCEDURES OF ARTICLE 22.3 OF THE DSU APPLY TO BRAZIL'S REQUEST?

1. Arguments of the parties¹⁹¹

5.4 Brazil argues in its Methodology Paper that the countermeasures proposed by Brazil, which include the suspension of concessions or other obligations not only with respect to trade in goods but also under TRIPS and GATS, are "appropriate" and "commensurate with the degree and nature of the adverse effects determined to exist", within the meaning of Articles 4.10 and 7.9 of the *SCM Agreement*. Brazil argues that the countermeasures it proposes, both in their quantitative and in their qualitative aspects, must be assessed solely against the requirements of Articles 4.10 and 7.9 of the *SCM Agreement*.¹⁹² Brazil considers that these are the only standards against which the countermeasures must be assessed.¹⁹³

5.5 Brazil also argues that the United States, as the party objecting to the proposed requests for countermeasures bears the burden of proving that the type of the countermeasures proposed by Brazil is such as to render them not "appropriate" in the meaning of Article 4.10 of the *SCM Agreement*. Likewise, with respect to the actionable subsidies, Brazil argues that the United States has the burden of proving that the type of the countermeasures proposed by Brazil is such as to render them not "commensurate with the degree and nature of the adverse effects determined to exist" as required by Article 7.9 of the *SCM Agreement*. Brazil argues that the United States failed to discharge its burden since it merely asserts that DSU Article 22.3 applies to the *SCM Agreement*. In Brazil's view, Articles 4.10 and 7.9 of the *SCM Agreement* provide for countermeasures that are different from those available under the DSU.¹⁹⁴

5.6 Brazil argues that Articles 4.10 and 7.9 of the *SCM Agreement* provide for "countermeasures" and such countermeasures can well encompass the suspension of concessions or obligations under sectors or agreements other than in which a violation was found.¹⁹⁵ Citing Article 49 of the *Draft Articles on Responsibility of States for Internationally Wrongful Acts*, Brazil argues that the purpose of a "countermeasure" as stated in that article is to induce the offending state to comply with its obligations. Therefore, Brazil advocates that there is nothing in public international law to support the notion that a countermeasure has to be taken in the same area or under the same agreement in which a violation is found.¹⁹⁶ Brazil is of the view that Articles 4.10 and 7.9 are "special or additional rules" within the meaning of Article 1.2 of the DSU, and that they address both the level and the type of countermeasures that may be imposed by the original complaining Member in sharp contrast to Article 22.4 and 22.3 of the DSU.¹⁹⁷ Brazil contends that the Arbitrator should apply the standards under the *SCM Agreement*, not the principles and procedures under Article 22.3 of the DSU.¹⁹⁸ The mandate of the Arbitrator is solely to determine whether countermeasures are "appropriate" or "commensurate".¹⁹⁹

¹⁹¹ In this section, the arguments of the parties are reflected as they were presented by the parties in their submissions, i.e. with reference both to the actionable subsidies addressed in this Decision and to the prohibited subsidies addressed in the separate Decision in WT/DS267/ARB/1. In the subsequent assessment by the Arbitrator in section 2 below, only the arguments relating to the actionable subsidies at issue in these proceedings are addressed.

¹⁹² Brazil's Methodology Paper, para. 142.

¹⁹³ Brazil's written submission, para. 450.

¹⁹⁴ Brazil's written submission, paras. 452-453.

¹⁹⁵ Brazil's written submission, para. 454.

¹⁹⁶ Brazil's written submission, paras. 458-459.

¹⁹⁷ Brazil's written submission, paras. 464-465.

¹⁹⁸ Brazil's written submission, para. 472.

¹⁹⁹ Brazil's written submission, para. 470.

5.7 With respect to the issue whether *SCM Agreement* and Article 22.3 of the DSU can be read as complementing each other, Brazil argues that "if a special or additional rule or procedure does not provide *additional* requirements that are to be met *together* with the corresponding provisions of the DSU – so as to effectively *complement* them without negatively affecting their legal integrity – the two sets of provisions cannot be *applied together*." Brazil continues to argue that if they cannot be applied together it is because there is a difference between them. In such case, Brazil argues the special or additional rule or procedure must prevail over the corresponding DSU provisions.²⁰⁰

5.8 Brazil considers that Article 22.3 of the DSU establishes a legal standard based on the consideration by the Member concerned of the practicability and effectiveness of suspension of concessions and sets out a number of elements that have to be considered, whereas Articles 4.10 and 7.9 of the *SCM Agreement* contain no restrictions on the type of countermeasures that may be taken. Articles 4.10 and 7.9 of the *SCM Agreement* grant to the Member concerned a margin of appreciation that is broader than the one reflected in the requirements of Article 22.3 of the DSU. They cannot be applied together.²⁰¹

5.9 The United States argues that DSU disciplines concerning suspension of concessions, including Article 22.3, apply to the *SCM Agreement*.²⁰² In its view, the fact that the *SCM Agreement* does not provide for rules relating to cross-sector suspension of concessions independent of DSU Article 22.3, when special rules for other issues were carved out, suggests the disciplines on cross-sector suspension of concessions remain securely tied to the existing DSU rules and procedures.²⁰³

5.10 The United States also argues that Brazil itself explicitly invoked Article 22.3 of the DSU in its request for countermeasures for prohibited subsidies and in its request for actionable subsidies. Therefore, in the United States' view, Brazil has actually conceded that its requests are subject to Article 22.3 of the DSU. The United States also argues that the fact that Article 22.3(g) cross-references the agreements to which it applies, including the *SCM Agreement*, also indicates that Article 22.3 of the DSU applies to requests for countermeasures under the *SCM Agreement*.²⁰⁴

5.11 The United States argues that given the general rule for suspension of concessions within the same sector under the DSU and the absence of any rule to the contrary in Articles 4.10 and 7.9 of the *SCM Agreement*, there is no conflict in applying both the *SCM Agreement* and Article 22.3 of the DSU. Thus, the better interpretation – and one that allows Articles 4.10 and 7.9 of the *SCM Agreement* to be applied in a complementary fashion with Article 22.3 of the DSU – is that Articles 4.10 and 7.9 deal with the amount of countermeasures, while Article 22.3 of the DSU sets forth rules for determining when countermeasures can be applied on a cross-sector basis. To the extent there is conflict between them, it is in regard to the assessment of quantity, or the amount, of the suspension of concessions. With regard to "type" or "form", the United States argues that the silence of the *SCM Agreement* as to cross-agreement or cross-sector countermeasures mean that there is no "difference" in the meaning of Article 1.2 of the DSU that would require ignoring the carefully articulated, hierarchical test under Article 22.3.²⁰⁵

²⁰⁰ Brazil's responses to questions from the Arbitrator, question 40, para. 460.

²⁰¹ Brazil's responses to questions from the Arbitrator, question 40, paras. 461-462.

²⁰² US written submission, para. 320.

²⁰³ US written submission, para. 323.

²⁰⁴ US oral statement, para. 67.

²⁰⁵ US responses to questions from the Arbitrator, question 67, para. 185.

2. Assessment by the Arbitrator

5.12 The question before us relates to the definition of our mandate, as well as to the substantive legal standard that is applicable to the imposition of cross-retaliation under the *SCM Agreement*. Both aspects are closely related, in that the nature and scope of our mandate is logically tied to the applicable substantive requirements, the application of which we must review.

5.13 The parties essentially disagree as to the extent to which the provisions of Article 22.3 of the DSU, which set out specific principles and procedures for the authorization of cross-retaliation in dispute settlement proceedings under the DSU, are applicable in the context of proceedings concerning actionable subsidies under the *SCM Agreement*, which contains specific provisions relating to countermeasures.

5.14 As a starting point, we need to consider the terms of the relevant provisions of the *SCM Agreement* and of the DSU. We recall that Article 7.9 of the *SCM Agreement* specifically addresses the question of the countermeasures that may be authorized in relation to actionable subsidies, and Article 7.10 addresses the mandate of the arbitrator in relation to such countermeasures, in the event that an arbitration is requested under Article 22.6 of the DSU in relation to actionable subsidies. Article 7.9 requires countermeasures in relation to actionable subsidies to be "commensurate with the degree and nature of the adverse effects determined to exist". Article 7.10, in turn, provides that, in the event that a party to the dispute requests arbitration under paragraph 6 of Article 22 of the DSU, the arbitrator shall determine whether the countermeasures are "commensurate with the degree and nature of the adverse effects determined to exist".

5.15 Article 22.6 of the DSU, in turn, provides that:

"When the situation described in paragraph 2 occurs, the DSB, upon request, shall grant authorization to suspend concessions or other obligations within 30 days of the expiry of the reasonable period of time unless the DSB decides by consensus to reject the request. However, if the member concerned objects to the level of suspension proposed, or claims that the principles and procedures set forth in paragraph 3 have not been followed where a complaining party has requested authorization to suspend concessions or other obligations pursuant to paragraph 3(b) or (c), the matter shall be referred to arbitration."

5.16 Paragraphs 9 and 10 of Article 7 of the *SCM Agreement* constitute "special or additional rules" under Appendix 2 of the DSU. In accordance with Article 1.2 of the DSU, "to the extent that there is a difference between the rules and procedures of this understanding and the special or additional rules and procedures set forth in Appendix 2, the special or additional rules and procedures in Appendix 2 shall prevail".

5.17 The Appellate Body has clarified the circumstances in which such a "difference" would exist:

"[I]t is only where the provisions of the DSU and the special or additional rules and procedures of a covered agreement *cannot* be read as *complementing* each other that the special or additional provisions are to *prevail*. A special or additional provision should only be found to *prevail* over a provision of the DSU in a situation where adherence to the one provision will lead to a violation of the other provision, that is, in the case of a *conflict* between them. An interpreter must, therefore, identify an *inconsistency* or a *difference* between a provision of the DSU and a special or

additional provision of a covered agreement *before* concluding that the latter *prevails* and that the provision of the DSU does not apply."²⁰⁶

5.18 The question before us in this case is whether Article 22.3 of the DSU and Article 7.9 and 7.10 of the *SCM Agreement* can be read as complementing each other, or whether adherence to the principles and procedures contained in Article 22.3 of the DSU would lead to a violation of Article 7.9 or 7.10 of the *SCM Agreement*, such that there is a *conflict* between the two provisions. In other words, we must clarify whether the special or additional rules of Article 7.9 and 7.10 of the *SCM Agreement* constitute the entirety of the applicable rules relating to the type and level of countermeasures that may be authorized in relation to actionable subsidies, or whether the principles and procedures of Article 22.3 of the DSU and these provisions may be read as complementing each other in defining the rules applicable to the suspension of concessions or other obligations in relation to actionable subsidies.

5.19 We first note that paragraphs 9 and 10 of Article 7, and more generally the provisions of Article 7 of the *SCM Agreement* concerning "remedies", are closely tied to the terms and procedures of the DSU itself. Indeed, the arbitration that is addressed in Article 7.10, which defines the mandate of the arbitrator with reference to the terms of Article 7.9, is defined as an arbitration requested "under paragraph 6 of Article 22 of the DSU". It is clear from the use of this cross-reference, that the arbitral proceedings at issue, even though they are in relation to actionable subsidies under the *SCM Agreement*, are initiated under Article 22.6 of the DSU. The legal basis for such proceedings is therefore Article 22.6 of the DSU, as well as Article 7.10 of the *SCM Agreement*.

5.20 Under the terms of Article 22.6 of the DSU, the Member concerned may challenge two distinct aspects of a request for authorization to suspend concessions or other obligations. The Member concerned may object to "the level of suspension proposed", or it may "claim that the principles and procedures set forth in paragraph 3 (of Article 22) have not been followed" where a complaining party has requested authorization to suspend concessions or other obligations pursuant to paragraph 3(b) or (c). If either of these two claims is made, then "the matter shall be referred to arbitration". The reference to an arbitration requested "under paragraph 6 of Article 22 of the DSU" in Article 7.10 of the *SCM Agreement*, therefore, on its face, refers to the existence of (i) an objection to the "level of suspension proposed" and/or (ii) a claim that the principles and procedures of Article 22.3 of the DSU have not been followed, which are to be referred to arbitration.

5.21 In the case of an arbitration carried out under the DSU alone, the mandate of the arbitrator is further defined in Article 22.7, which provides in its first sentence that "the arbitrator acting pursuant to paragraph 6 shall not examine the nature of the concessions or other obligations to be suspended but shall determine whether the level of such suspension is equivalent to the level of nullification or impairment". This is in line with the terms of Article 22.4, which provides that the level of the suspension shall be "equivalent to the level of nullification or impairment". This is comparable, in structure, to the terms of Article 7.10 of the *SCM Agreement*, which provides that the arbitrator "shall determine whether the countermeasures are commensurate with the degree and nature of the adverse effects determined to exist", in line with the terms of Article 7.9, which provides that the DSB shall grant authorization to take countermeasures "commensurate with the degree and nature of the adverse effects determined to exist".

5.22 The provisions of Article 22.7 of the DSU and Article 7.10 of the *SCM Agreement* differ, in that Article 22.7 of the DSU further articulates that, if the matter referred to the arbitrator includes a claim that the principles and procedures have not been followed, the arbitrator shall examine that claim, whereas Article 7.10 of the *SCM Agreement* contains no exact equivalent. The question therefore arises as to how the mandate of the arbitrator should be understood in a situation where a

²⁰⁶ Appellate Body Report, *Guatemala – Cement I*, para. 65.

claim that the principles and procedures of Article 22.3 of the DSU have not been followed is referred to arbitration in accordance with Article 22.6 of the DSU, in relation to actionable subsidies.

5.23 In order to give useful meaning to all the terms of the treaty, including those of Article 22.3 of the DSU and the reference to Article 22.6 of the DSU in Article 7.10 of the *SCM Agreement*, we must a priori read the terms of that provision as envisaging that the principles and procedures of Article 22.3 of the DSU apply, including in cases relating to actionable subsidies, and that a claim may be made in relation to these principles and procedures. In accordance with the principle that the special or additional rules listed in Appendix 2 of the DSU would only prevail in the event of a "difference" (i.e. if it were not possible to apply both simultaneously), it is only in the event that we determine that there is a conflict or incompatibility between such a reading and the terms of Article 7.10 of the *SCM Agreement*, that we should conclude otherwise.

5.24 It appears to us that such a conflict or incompatibility would arise between the application of the principles and procedures in Article 22.3 of the DSU and the terms of Article 7.9 and 7.10 of the *SCM Agreement* only if the terms "countermeasures commensurate with the degree and nature of the adverse effects determined to exist" in these provisions are interpreted to define not only the permissible level of countermeasures in the case of actionable subsidies, but also the type of countermeasures that may be authorized, so that the principles and procedures of Article 22.3 of the DSU would be inoperative in cases relating to actionable subsidies.

5.25 We are not persuaded that this is the case. As was discussed in detail in Section IV.C above it is undisputed that the expression "countermeasures commensurate with the degree and nature of the adverse effects determined to exist" defines the permissible level of countermeasures in relation to actionable subsidies. In our view, it does not do more than that. The notion of "commensurateness" clearly connotes a certain correspondence" in the level or measurement of the countermeasures. By contrast, it is not clear that these terms provide any guidance as to the type of countermeasures that may be authorized.

5.26 In light of the level of detail in which the matter of cross-sectoral retaliation is addressed in the DSU, one would have expected the drafters of the *SCM Agreement* to provide express guidance to this effect, if they had intended to address differently the question of the type of permissible countermeasures, as well as their level. In fact, this would have been especially necessary in light of the fact that Article 22.6 of the DSU, which is expressly referred to in Article 7.10 of the *SCM Agreement*, foresees that a challenge to proposed suspension of concessions or other obligations may be based either on the level of suspension proposed, or on a claim "that the principles or procedures of paragraph 3 (of Article 22 of the DSU) have not been followed".

5.27 While the expression "the level of proposed suspension" does not in itself prejudice the standard upon which such "level" might be reviewed, and thus allows this standard to differ depending on the type of measure at issue, the reference to the "principles and procedures" of Article 22.3 of the DSU leaves no doubt as to the relevant legal standard. This part of the reference to Article 22.6 of the DSU in Article 7.10 of the *SCM Agreement* would have to be read out of the provision in order to conclude that the principles and procedures of Article 22.3 of the DSU do not apply in the context of proceedings relating to actionable subsidies. In light of our analysis above, we see no basis to do so. We also note that, as treaty interpreters, we are required to "read all applicable provisions of a treaty in a way that gives meaning to all of them, harmoniously".²⁰⁷ The only manner in which we can give full meaning to all the terms of the treaty harmoniously in this context is to understand the terms of Article 7.9 and 7.10 of the *SCM Agreement* as meaning that the mandate of the arbitrator as defined in Article 7.10 of the *SCM Agreement* relates to the determination of the level

²⁰⁷ See for example Appellate Body Report, *Canada – Dairy*, para. 133, and Appellate Body Report, *US – Upland Cotton*, para. 549.

of countermeasures, while the terms of the arbitrator's mandate in relation to a claim that the procedures and principles of Article 22.3 of the DSU have not been followed is contained in Article 22.6 of the DSU.

5.28 This interpretation is also consistent, in our view, with the context in which these provisions arise. The various paragraphs under Article 7 of the *SCM Agreement* may not be read in isolation from the DSU. Rather, we understand the terms of Article 7 of the *SCM Agreement* as providing specific additional rules on specific aspects of dispute settlement proceedings relating to actionable subsidies, which replace the equivalent rules of the DSU only to the extent that they differ from and are incompatible with such rules.

5.29 In Article 7.10 of the *SCM Agreement*, it was not necessary for the drafters to clarify that, in relation to a claim that the principles and procedures of Article 22.3 have not been followed, the arbitrator would review that claim, since the terms of Article 22.7 of the DSU, which generally define the terms under which an arbitration under Article 22.6 is to be carried out, already address this point. Only to the extent that the mandate of the arbitrator *differed* from that set forth in Article 22.7 of the DSU, was it necessary to explicitly define it in Article 7.10 of the *SCM Agreement*, in order to ensure that the mandate of the arbitrator in relation to the proposed level of countermeasures would be consistent with the manner in which the permissible level of countermeasures is defined in Article 7.9 of the *SCM Agreement* for actionable subsidies. Indeed, Article 22.7 of the DSU sets out a number of other aspects relating to arbitration proceedings pursuant to Article 22.6 of the DSU, which are not replicated in Article 7.10 of the *SCM Agreement*, but which nonetheless are clearly relevant and applicable to such proceedings. In particular, the last two sentences of Article 22.7 provide that:

"The parties shall accept the arbitrator's decision as final and the parties concerned shall not seek a second arbitration. The DSB shall be informed promptly of the decision of the arbitrator and shall, upon request, grant authorization to suspend concessions or other obligations where the request is consistent with the decision of the arbitrator, unless the DSB decides by consensus to reject the request."

These important provisions are clearly relevant to arbitral proceedings in relation to actionable subsidies under the *SCM Agreement*.

5.30 Finally, we consider that our interpretation is faithful also to the object and purpose of dispute settlement proceedings in the WTO and to their integrated nature. The DSU provides the common framework under which dispute settlement proceedings are initiated in the WTO, and brings together all the covered Agreements. This is the overall framework in which the question of the possibility of seeking suspension of obligations under another sector, or another covered Agreement than that under which the violation has been found, arises, and this is logically addressed in the context of the DSU.

5.31 We are mindful that we must give full meaning to all the terms of the treaty, including the special or additional rules identified in Appendix 2, and that such special or additional rules may legitimately prevail over any relevant DSU rules and procedures. However, we are not persuaded that there is a conflict, such that the principles and procedures of Article 22.3 of the DSU would be inapplicable in the case of disputes relating to actionable subsidies under the *SCM Agreement*.

5.32 In light of all the above, we conclude that the principles and procedures of Article 22.3 of the DSU apply to the claim before us and that we must review the United States' claim that these principles and procedures have not been followed by Brazil.

B. MANDATE OF THE ARBITRATOR AND BURDEN OF PROOF

5.33 Having determined that the principles and procedures of Article 22.3 of the DSU apply to Brazil's request and that we are required to review the United States' claim that Brazil has not followed these principles and procedures, we need to clarify further what our mandate is, in relation to this claim, and what burden of proof applies to it.

1. Main arguments of the parties

5.34 The United States considers that the drafter's intention was that suspending concessions across sectors and agreements was the exception rather than the rule. In the United States' view, Article 22.3 establishes a hierarchy of suspension: Members must first try to suspend concessions within the same sector, and if that is not practicable or effective, can then request permission to suspend in a different sector. This distinction is important in the GATS and TRIPS Agreements where there are multiple sectors, but does not apply with respect to goods. The bar for suspending concessions under other agreements is higher still. The United States adds that not only does the suspension within the agreement have to be neither practicable nor effective, but the violation must be serious enough to warrant cross-agreement suspension.²⁰⁸

5.35 The United States further considers that the disciplines of Article 22.3 are an integral part of the dispute resolution process and the rebalancing of concessions. The United States cites the statement of the arbitrator on *EC – Bananas III (US) (Article 22.6 – EC)*, that "the basic rationale of these disciplines is to ensure that the suspension of concessions or other obligations across sectors or across agreements (beyond those sectors or agreements under which a panel or the Appellate Body has found violations) remains the exception and does not become the rule". The United States therefore considers it necessary for the Arbitrator to determine whether Brazil has objectively followed these procedures. The United States also contends that Brazil is entitled to a certain margin of appreciation in making this determination, but the Arbitrator also has an obligation to judge whether Brazil has objectively reviewed the facts and has reached a plausible conclusion.²⁰⁹

5.36 The United States argues that for a party to request cross-agreement suspension of concessions, it must find that:

- (a) it is not practicable or effective to suspend concessions or other obligations with respect to other sectors under the same agreement; and
- (b) that the circumstances are serious enough to warrant cross-agreement suspension of concessions.

5.37 It considers that, when analysing these requirements, the party must take into account: (i) the trade in the sector or under the agreement under which the panel or Appellate Body has found a violation or other nullification or impairment, and the importance of such trade to that party, and (ii) the broader economic elements related to the nullification or impairment and the broader economic consequences of the suspension of concessions or other obligations. The complaining party must further explain how it has reached the conclusion that cross-agreement suspension of concessions is warranted.²¹⁰

5.38 Brazil notes the arbitrator's "plausibility" standard as enunciated in the *US – Gambling (Article 22.6 – US)* arbitration. This standard calls for an objective assessment of the facts and a

²⁰⁸ US written submission, para. 325.

²⁰⁹ US written submission, para. 326.

²¹⁰ US written submission, para. 327.

plausible conclusion on the issue of whether it is "practicable or effective" to seek countermeasures in the same sector and on whether the circumstances are serious enough.²¹¹ Brazil considers, however, that the Arbitrator should be limited to examining whether Brazil has in fact considered the principles set forth in Article 22.3 of the DSU, not whether Brazil's considerations are plausible.²¹² Brazil notes the United States position, in the DSB meeting on the adoption of the *EC – Bananas III (US)* (Article 22.6 – EC) arbitration report, that arbitrators are not supposed to "second guess" the conclusions reached by the Member who considers that it is not practicable or effective to suspend concessions or other obligations under the same agreement, and that the circumstances are serious enough within the meaning of Article 22.3.²¹³

5.39 Brazil also argues that the United States bears the burden of proving that Brazil has not followed the principles laid out in Article 22.3, specifically, (i) that it is both "practicable" and "effective" for Brazil to suspend concessions only in the goods sector, or (ii) that the circumstances are not "serious enough" to justify applying countermeasures under another covered agreement. With respect to Article 22.3(d), Brazil argues that the United States has to prove that in selecting countermeasures, Brazil did not take into account the elements indicated in items (d)(i) and (ii).²¹⁴

2. Approach of the Arbitrator

5.40 Article 22.3 sets out certain principles and procedures to be followed by a complaining party seeking to suspend concessions, as to the sector(s) and/or covered agreement in which the suspension can take place, which the United States claims that Brazil did not follow.

5.41 We recall our earlier determination that these principles and procedures apply to Brazil's request, and that Article 22.7 of the DSU provides the basis for our mandate to review this claim. Article 22.7 provides that "if the matter referred to arbitration includes a claim that the principles and procedures set forth in paragraph 3 have not been followed, the arbitrator shall examine that claim" and that "[i]n the event the arbitrator determines that those principles and procedures have not been followed, the complaining party shall apply them consistent with paragraph 3".

5.42 We are therefore required to examine the United States' claim that Brazil has not followed the principles and procedures of Article 22.3 of the DSU.

5.43 As a general principle, Article 22.3(a) of the DSU provides that suspension of concessions or other obligations should first be sought in the same sector as that in which a violation was found. Article 22.3 provides in relevant part that:

"In considering what concessions or other obligations to suspend, the complaining party shall apply the following principles and procedures:

- (a) the general principle is that the complaining party should first seek to suspend concessions or other obligations with respect to the same sector(s) as that in which the panel or Appellate Body has found a violation or other nullification or impairment."

²¹¹ Brazil's written submission, para. 501.

²¹² Brazil's written submission, para. 406.

²¹³ Brazil's written submission, para. 505.

²¹⁴ Brazil's written submission, para. 509.

5.44 Subparagraphs (b) and (c) of Article 22.3 further specify the principles and procedures to be followed by a complaining party wishing to seek suspension in another sector, or another agreement, than that in which a violation was found:

- "(b) if that party considers that it is not practicable or effective for it to suspend concessions or other obligations with respect to the same sector(s), it may seek to suspend concessions or other obligations in other sectors under the same agreement;
- (c) if that party considers that it is not practicable or effective to suspend concessions or other obligations with respect to other sectors under the same agreement, and that the circumstances are serious enough, it may seek to suspend concessions or other obligations under another covered agreement."

5.45 In addition, subparagraph (d) of Article 22.3 provides that:

- "(d) in applying the above principles, that party shall take into account:
 - (i) the trade in the sector or under the agreement under which the panel or the Appellate Body has found a violation or other nullification or impairment, and the importance of such trade to that party;
 - (ii) the broader economic elements related to the nullification or impairment and the broader economic consequences of the suspension of concessions or other obligations."

5.46 Two prior arbitrators have considered the mandate of the arbitrator set out in Article 22.7 of the DSU with respect to the principles and procedures set forth in Article 22.3, and we find it useful to refer to their findings in clarifying the terms of our own mandate.

5.47 The arbitrator on *EC – Bananas III (Ecuador) (Article 22.6 – EC)*, in determining the scope of its authority to review the principles and procedures relating to requests for suspension of concessions or other obligations under subparagraphs (b) and/or (c), considered that "the fact that the powers of arbitrators under subparagraphs (b)-(c) are explicitly provided for in Article 22.6 implies *a fortiori* that the authority of Arbitrators includes the power to review whether the principles and procedures set forth in these subparagraphs have been followed by the Member seeking authorization for suspension".²¹⁵

5.48 The arbitrator also considered the terms of Article 22.3, including the fact that a certain margin of appreciation is left to the complaining party in arriving at conclusions in respect of certain factual elements (i.e. "if *that party considers*" in subparagraphs (b) and (c)) as well as the fact that the party concerned is required to apply the principles of Article 22.3 (i.e. "*shall* apply the following principles and procedures" in the introductory clause of Article 22.3). On the basis of that textual analysis, the arbitrator determined that:

"[T]he margin of review by the Arbitrators implies the authority to broadly judge whether the complaining party in question has considered the necessary facts objectively and whether, on the basis of these facts, it could plausibly arrive at the conclusion that it was not practicable or effective to seek suspension within the same

²¹⁵ Decision by the Arbitrators, *EC – Bananas III (Ecuador) (Article 22.6 – EC)*, para. 50.

sector under the same agreements, or only under another agreement provided that the circumstances were serious enough."²¹⁶

5.49 The arbitrator in that dispute also considered more broadly the terms of Article 22.3 and noted that "these provisions imply a sequence of steps towards WTO-consistent suspension of concessions or other obligations which respects both a margin of appreciation for the complaining party as well as a margin of review by Arbitrators, if a request for suspension under Article 22.2 is challenged under Article 22.6".²¹⁷

5.50 Like the arbitrator on *US – Gambling (Article 22.6 – US)*, we agree with these determinations. We agree that the principles and procedures set forth in Article 22.3 of the DSU, which require the complaining party to make certain determinations, imply "a margin of appreciation" for the complaining party in making these determinations. At the same time, Article 22.3 sets out specific principles and procedures that the complaining party must follow, and we understand the role of the arbitrator acting pursuant to Article 22.7 of the DSU to involve a review of whether those principles and procedures have been followed. It would not be sufficient for a complaining party to have considered those principles and procedures solely from the viewpoint of being able to say that it did so. The consideration must be a substantive and reasoned one, and a claim to be entitled to impose countermeasures outside the relevant sector, and then outside the relevant agreement, must arise from that consideration.

5.51 We also agree with the arbitrator on *EC – Bananas III (Ecuador) (Article 22.6 – EC)* that this mandate includes a determination of "whether the complaining party in question has considered the necessary facts objectively" and also "whether, on the basis of these facts, it could plausibly arrive at the conclusion that it was not practicable or effective to seek suspension within the same sector under the same agreements, or only under another agreement provided that the circumstances were serious enough".

5.52 In addition, should we determine that Brazil has not followed these procedures or principles, we believe it to be both necessary and appropriate for us to articulate how the analysis could properly take place to the extent necessary to ensure that Brazil is in a position to apply these procedures and principles "consistent with paragraph 3" and present a request "consistent with the decision of the arbitrator" in a subsequent phase of these dispute settlement proceedings, as foreseen in Article 22.7 of the DSU.

5.53 We note in this respect that Article 22.7 provides in relevant part that:

"[I]f the matter referred to arbitration includes a claim that the principles and procedures set forth in paragraph 3 have not been followed, the arbitrator shall examine that claim. *In the event the arbitrator determines that those principles and procedures have not been followed, the complaining party shall apply them consistent with paragraph 3.* The parties shall accept the arbitrator's decision as final and the parties concerned shall not seek a second arbitration. *The DSB shall be informed promptly of the decision of the arbitrator and shall upon request, grant authorization to suspend concessions or other obligations where the request is consistent with the decision of the arbitrator, unless the DSB decides by consensus to reject the request.*" (emphasis added)

5.54 This approach is consistent with the objective of prompt and positive settlement of disputes. This approach is also consistent with the practice of arbitrators acting under Article 4.10 of the

²¹⁶ Decision by the Arbitrators, *EC – Bananas III (Ecuador) (Article 22.6 – EC)*, para. 52.

²¹⁷ Decision by the Arbitrators, *EC – Bananas III (Ecuador) (Article 22.6 – EC)*, para. 55.

SCM Agreement and/or Article 22.6 of the DSU, of proceeding with a calculation of the permissible level of countermeasures in the event that they find the proposed countermeasures not to be in accordance with the applicable legal standard.²¹⁸

5.55 In terms of burden of proof, we consider that it is for the United States, as the party challenging Brazil's determinations, to demonstrate that Brazil has not followed the principles and procedures of Article 22.3 of the DSU. At the same time, it is essential that Brazil provides us with explanations on how it made this determination, in order for us to be in a position to review it, and to determine whether Brazil has, in making its determinations, "considered the necessary facts objectively" and whether it could plausibly reach the conclusions that it did.

5.56 The United States also asks the Arbitrator to indicate in its decision, if necessary, the maximum amount up to which Brazil would be permitted to impose cross-agreement suspension of concessions.²¹⁹ The United States requests the Arbitrator to issue separate awards, one in relation to the prohibited subsidies and one concerning actionable subsidies so that, in case the United States brings one subsidy into compliance with the DSB recommendations and rulings before it is able to comply with the other, the separate awards provide a legal basis to ensure that countermeasures are still consistent with the legal standards of the *SCM Agreement* and the DSU in that situation.²²⁰

5.57 We first recall that two separate decisions are being issued, one in relation to the prohibited subsidies²²¹ and one concerning actionable subsidies (this Decision), as the United States requests.²²²

5.58 We agree that, to the extent that we might determine that Brazil may impose part of the proposed countermeasures in another sector or agreement, we would need to indicate clearly the amount of countermeasures in respect of which it would be entitled to suspend concessions or other obligations in such other sector or agreement.

5.59 We do not consider it necessary, however, to determine in this Decision what our conclusion might have been, in the event that the United States should, at some future point in time, comply with the DSB's recommendations and rulings in relation to the measures covered by the other proceedings.²²³ This is a hypothetical matter on which it would not be appropriate for us to speculate. Rather, we base our assessment on the situation as it exists at the time of our determination, which includes the fact that the United States has not complied with two separate aspects of the underlying recommendations and rulings in this dispute and that this gives rise to an entitlement for Brazil to take countermeasures in relation to both aspects.

5.60 At the same time, we recall that our determinations in these proceedings relate only to Brazil's request in relation to the actionable subsidies at issue. Our determinations on Brazil's request for cross-retaliation take into account the factual circumstances arising from the separate proceedings relating to the prohibited subsidies also ruled on in the underlying proceedings, but no entitlement arises from this Decision for Brazil to take countermeasures in relation to such subsidies.

²¹⁸ See for example Decision by the Arbitrators, *EC – Hormones (US) (Article 22.6 – EC)*, para. 12.

²¹⁹ US responses to questions from the Arbitrator, question 134, para. 165.

²²⁰ US comments on Brazil's responses to questions from the Arbitrator, question 134, para. 171.

²²¹ See WT/DS267/ARB/1.

²²² See Section I.C above, at paras. 1.27-1.31.

²²³ See WT/DS267/ARB/1.

C. BRAZIL'S DETERMINATION THAT IT IS NOT PRACTICABLE OR EFFECTIVE TO TAKE COUNTERMEASURES WHOLLY IN TRADE IN GOODS

1. **The principles and procedures of Article 22.3 of the DSU**

5.61 Article 22.3 of the DSU, as we have observed earlier, foresees certain "procedures and principles" to be followed by the complaining party, in order to seek to suspend concessions in another sector or another agreement than that in which the violation was found.

5.62 As observed by the arbitrator on *US – Gambling (Article 22.6 – US)*:

"[T]hese provisions imply a sequence of steps towards WTO-consistent suspension of concessions or other obligations'.²²⁴ In other words, as Antigua has expressed it, Article 22.3 of the DSU provides a 'hierarchy' of remedies that a complaining party must follow in determining in which sectors or under which agreements suspension of concessions or other obligations can be sought, namely (1) seek to suspend in the same sector in the same agreement, (2) seek to suspend within the same agreement and (3) seek to suspend under another agreement."²²⁵

5.63 In this case, the initial violation was found in relation to trade in goods, and this is the "sector" (as defined in subparagraph (g) of Article 22.3) in which Brazil would normally be expected to apply countermeasures under subparagraph (a). Subparagraph (b) affords the possibility of seeking to suspend concessions or other obligations "in other sectors under the same agreement". For the purposes of this provision, all the agreements on trade in goods contained in Annex 1A of the WTO Agreement "taken as a whole" are considered to be an "agreement", and a sector is defined, with respect to goods, as "all goods".

5.64 Therefore, recourse to subparagraph (b) would in principle allow Brazil to seek to suspend concessions or other obligations in all goods, under the Agreements on trade in goods. Brazil seeks to apply countermeasures under the TRIPS and GATS Agreement. This would constitute suspension of concession or other obligations "under another agreement" within the meaning of subparagraph (c) of Article 22.3.

5.65 Accordingly, Brazil will have followed the principles and procedures of Article 22.3 if it has determined, in accordance with the terms of subparagraph (c), that:

- (a) "it is not practicable or effective" to seek suspension under the same agreement (i.e. under the agreements on trade in goods); and
- (b) "the circumstances were serious enough".

5.66 In addition, in applying these principles, Brazil is required to have taken into account the factors identified in subparagraph (d) of Article 22.3.

5.67 As we have determined above, our mandate is to review whether, in making these determinations, Brazil has considered the necessary facts objectively and whether, on the basis of these facts, it could plausibly arrive at the conclusion that it was not practicable or effective to seek suspension under the same agreement and that the circumstances were serious enough. In order to conduct this assessment, we must first clarify the terms of these requirements, as well as the role of the elements referred to in subparagraph (d).

²²⁴ (*original footnote*) Decision by the arbitrators, *EC – Bananas III*, (request by Ecuador), para. 55.

²²⁵ Decision by the Arbitrator, *US – Gambling (Article 22.6 – US)*, para. 4.19.

5.68 At the outset, we note that the two requirements within subparagraph (c) are cumulative, i.e. the complaining Member must consider that "it is not practicable or effective" to seek suspension of concessions or other obligations under the same agreement *and* that "the circumstances are serious enough". The additional requirement, under subparagraph (d), to take into account certain considerations, further qualifies the manner in which the principles contained in subparagraph (c) are to be applied.

- (a) First requirement under subparagraph (c): a determination that it is "not practicable or effective" to suspend concessions or other obligations with respect to other sectors under the same agreement

5.69 In order to seek to suspend concessions or other obligations under another agreement, the complaining party must in the first instance consider that it is "not practicable or effective" to seek suspension under the same agreement. Brazil considers that it does not need to meet both the "practicable" and "effective" criteria, and that it is sufficient to satisfy one of the two conditions.²²⁶

5.70 We agree that the wording of the provision implies that the complaining party may consider either that it is "not practicable" or that it is "not effective" to seek suspension under the same agreement, and that it need not conclude that same-agreement suspension is both "not practicable" and "not effective", in order to reach the conclusion that it is "not practicable or effective".²²⁷

- (i) "practicable"

5.71 In Brazil's view, the standard of "practicability" under Article 22.3 refers to the availability for application in practice of the suspension of concessions only in the goods sector.²²⁸ In Brazil's view, "practicability" refers to whether suspension in the same sector or agreement is *available for application in practice*, as well as *suited for being used in a particular case*. If it is not a real option or it is not suited to be used in the circumstances, it will be not practicable.²²⁹ This is how the arbitrators on *EC – Bananas III* and *US – Gambling* understood this term, and we agree with this determination.

5.72 As Brazil describes it, and as the arbitrator on *EC – Bananas III (Ecuador) (Article 22.6 – EC)* put it, a consideration of whether suspension in a given sector or agreement is "practicable" relates primarily to whether it is actually "available in practice" to the complaining party. We find the example used by the arbitrator on *EC – Bananas III (Ecuador) (Article 22.6 – EC)* helpful in clarifying the types of considerations that may be pertinent in such a determination:

"To give an obvious example, suspension of commitments in service sub-sectors or in respect of modes of service supply which a particular complaining party has not bound in its GATS schedule is not available for application in practice and thus cannot be considered as practicable."²³⁰

5.73 There may be a range of situations in which the suspension of concessions or other obligations in relation to a certain sector or agreement is not "available in practice". In our view, the essence of a consideration of "practicability" of suspension is that it relates to its actual availability and feasibility. The impracticability could be either a legal one, as postulated in the example given in

²²⁶ Brazil's responses to questions from the Arbitrator, question 8, para. 127.

²²⁷ See Decisions by the Arbitrator, *US – Gambling (Article 22.6 – US)*, para. 4.29 and *EC – Bananas III (Ecuador) (Article 22.6 – EC)*, para. 74.

²²⁸ Brazil's written submission, para. 510.

²²⁹ Brazil's responses to questions from the Arbitrator, question 8, para. 126.

²³⁰ Decision by the Arbitrators, *EC – Bananas III (Ecuador) (Article 22.6 – EC)*, para. 71.

EC – Bananas III (Ecuador) (Article 22.6 – EC), or a factual one, such as might arise if the countermeasure exceeds the total amount of the trade available to be countered.

(ii) "effective"

5.74 Citing the *EC – Bananas III (Ecuador) (Article 22.6 – EC)* arbitrator, Brazil argues that the "effectiveness" standard encourages the offending state to comply with WTO obligations, in other words, to induce compliance²³¹ and allows the party seeking suspension to ensure that the impact of that suspension is strong and has the desired result, namely to induce compliance. Brazil considers that "the countermeasures that are best tailored to provide such a response are those that can maximize the likelihood of compliance".²³²

5.75 In the United States' view, the likelihood of compliance is not a factor that the DSU provides in assessing the appropriate level or nature of the countermeasure.²³³ The United States considers that the DSU authorizes rebalancing of trade concessions in case a Member does not comply with its trade obligations. While the ultimate political goal of the DSU is to promote compliance, the legal standards for assessing countermeasures are the effects of nullification and impairment and these are two separate issues in the United States' view.²³⁴

5.76 The United States considers that the word "effective" means that a Member should not be prevented from imposing countermeasures of the intended weight as a result of the limitation of those countermeasures to the same sector/agreement. The intended "weight" is what is authorized based on the applicable standard, including where special or additional rules apply. Thus, a Member should be able to take the "appropriate" amount of countermeasures with respect to prohibited subsidies and, for subsidies causing adverse effects, a Member should be able to take countermeasures commensurate with those effects.²³⁵

5.77 Dictionary definitions of the term "effective" include "producing a decided, decisive, or desired effect"²³⁶ and "powerful in effect; producing a notable effect; effectual".²³⁷ The arbitrator on *EC – Bananas III (Ecuador) (Article 22.6 – EC)* relied on comparable definitions to conclude that "the thrust of this criterion empowers the party seeking suspension to ensure that the impact of that suspension is strong and has the desired result, namely to induce compliance with DSB rulings within a reasonable period of time".²³⁸ That arbitrator further elaborated on the types of circumstances in which a complaining party might consider that suspension in a given sector or agreement would not be "effective":

"One may ask whether this objective [of inducing compliance] may ever be achieved in a situation where a great imbalance in terms of trade volume and economic power exists between the complaining party seeking suspension and the other party which has failed to bring WTO-inconsistent measures into compliance with WTO law. In such a case, and in situations where the complaining party is highly dependent on imports from the other party, it may happen that the suspension of certain concessions or certain other obligations entails more harmful effects for the party seeking suspension than for the other party.²⁹ In these circumstances, a consideration by the

²³¹ Brazil's written submission, para. 511. *EC – Bananas III (Ecuador) (Article 22.6 – EC)*, para. 72.

²³² Brazil's Methodology Paper, para. 143.

²³³ US written submission, para. 337.

²³⁴ US written submission, paras. 339 and 341.

²³⁵ US responses to questions from the Arbitrator, question 137, para. 177.

²³⁶ In *Merriam-Webster Online Dictionary*. Retrieved 4 June 2009, from <http://www.merriam-webster.com/dictionary/effective>.

²³⁷ *Oxford English Dictionary*, at www.oed.com.

²³⁸ Decision by the Arbitrators, *EC – Bananas III (Ecuador) (Article 22.6 – EC)*, para. 72.

complaining party in which sector or under which agreement suspension may be expected to be least harmful to itself would seem sufficient for us to find a consideration by the complaining party of the effectiveness criterion to be consistent with the requirement to follow the principles and procedures set forth in Article 22.3."²³⁹

(original footnote) ²⁹ Of course, suspension of concessions or other obligations is always likely to be harmful to a certain, limited extent also for the complaining party requesting authorization by the DSB.

5.78 We do not share the view of the arbitrator on *EC – Bananas III (Ecuador) (Article 22.6 – EC)* that a consideration by the complaining party of the sector or agreement in which suspension would be "least harmful" to itself would necessarily be pertinent. As we read the terms of subparagraphs (b) and (c), a consideration of the "effectiveness" criterion under these provisions involves an assessment of the effectiveness – or lack thereof – of suspension *in the same sector or under the same agreement*, rather than an assessment of the relative effectiveness of such suspension, as compared to suspension in another sector or agreement. In other words, the procedures and principles under Article 22.3 do not entitle a complaining party to freely choose *the most* effective sector or agreement under which to seek suspension. Rather, it entitles the complaining party to move out of the same sector or same agreement, where it considers that suspension *in that sector or agreement* is not "practicable or effective".

5.79 We agree with the arbitrator on *EC – Bananas III (Ecuador) (Article 22.6 – EC)*, however, that the question of whether "the suspension of certain concessions or certain other obligations entails more harmful effects for the party seeking suspension than for the other party" would be pertinent to a consideration of the "effectiveness" of the said suspension. Indeed, as the arbitrator on *EC – Bananas III (Ecuador) (Article 22.6 – EC)* notes, there may be situations in which, for example, the complaining party is heavily dependent on imports from the other party, to such an extent that it may cause more harm to itself than it would to the other party, if it were to suspend concessions or other obligations in relation to these imports. In such a situation, where the complaining party would cause itself disproportionate harm, such that it would in fact be unable to use the authorization, there would be a basis for concluding that such suspension would not be "effective".

5.80 It may well be that the suspension of concessions or other obligations "is always likely to be harmful to a certain, limited extent also for the complaining party" applying it. However, this does not, in our view, imply that a consideration of such harm may not be relevant for the purposes of assessing the "effectiveness" of suspension in a given sector or agreement. In foreseeing that the complaining party may consider that same-sector or same-agreement suspension is "not practicable or effective", the drafters of the DSU have precisely acknowledged and recognized the possibility of circumstances in which suspension of certain obligations would not be effective, and they have sought to allow the complaining party the possibility of ensuring that it nonetheless has at its disposal an effective remedy in such circumstances, i.e. a remedy that may produce its intended effects. This includes, in our view, situations in which the harm that may arise from same-sector or same-agreement suspension would be so significant for the complaining party as to deter it from having recourse to it.

5.81 This is consistent with the objective of inducing compliance, in that this provision seeks to ensure that the complaining party will be in a position to actually have recourse to the authorized remedy, and thus enable it to contribute to inducing compliance, as is its legitimate purpose. At the same time, we agree with the United States that the "likelihood of compliance", as such, is not at issue

²³⁹ Decision by the Arbitrators, *EC – Bananas III (Ecuador) (Article 22.6 – EC)*, para. 73.

in this determination. Rather, what is at issue is the ability of the complaining party to make effective use of the awarded countermeasures in order to induce such compliance.

- (b) The second element under subparagraph (c): a determination that "the circumstances are serious enough"

5.82 As noted by the arbitrator on *US – Gambling (Article 22.6 – US)*, the text of Article 22.3(c) provides no specific guidance on how the terms "the circumstances are serious enough" are to be understood. The elements of subparagraph (d) do, however, provide useful guidance in this respect.

5.83 We therefore consider that the trade at issue, and its importance to the complaining party, as well as the broader economic elements relating to the nullification or impairment and the economic consequences of the suspension, may all be relevant in assessing whether the "circumstances are serious enough" in a given case.

5.84 At the same time, we consider that these terms inherently imply a degree of flexibility in assessing what "circumstances" may be pertinent in a given case, so that these may not be the only relevant considerations in such an assessment. We agree, in this respect, with the following determinations of the arbitrator on *US – Gambling (Article 22.6 – US)*:

"We also consider, more generally, that this aspect of the determination, which relates to "circumstances", is of necessity an assessment to be made on a case-by-case basis, and that the circumstances that are relevant may vary from case to case. We note however, that these circumstances should be serious "enough", which suggests that it is only when the circumstances reach a certain degree or level of importance, that they can be considered to be serious enough."²⁴⁰

- (c) The elements under subparagraph (d) of Article 22.3

5.85 Subparagraph (d) of Article 22.3 directs the complaining party to take into account two specific considerations, in applying the principles under the previous subparagraphs:

- (a) the trade in the sector or under the agreement under which the panel or the Appellate Body has found a violation or other nullification or impairment, and the importance of such trade to [the complaining] party; and
- (b) the broader economic elements related to the nullification or impairment and the broader economic consequences of the suspension of concessions or other obligations.

5.86 The first element, the "trade in the sector or under the agreement under which the panel or the Appellate Body has found a violation" is to be understood with reference to the definitions of the terms "sector" and "agreement" contained in subparagraph (g) of Article 22.3. As the arbitrator on *US – Gambling (Article 22.6 – US)* observed:

"[I]n order to determine whether suspension is practicable or effective in a certain sector, it is appropriate to take into account all the trade in that sector and its importance to the complaining party. This also appears to us consistent with the

²⁴⁰ Decision by the Arbitrator, *US – Gambling (Article 22.6 – US)*, para. 4.108.

purpose of this provision, which is to provide certain objective parameters to guide the conduct of such determination."²⁴¹

5.87 In the circumstances of this case, this means that what is to be taken into account is "the trade" in all goods under the trade in goods agreement, that is, trade in goods generally, and its importance to Brazil.

5.88 The second consideration required to be taken into account is the "broader economic elements related to the nullification or impairment" and the "broader economic consequences of the suspension. We agree with the determinations of the arbitrator on *EC – Bananas III (Ecuador) (Article 22.6 – EC)*, as endorsed also by the arbitrator on *US – Gambling (Article 22.6 – US)*, that:

"The fact that the former criterion relates to 'nullification or impairment' indicates in our view that this factor primarily concerns 'broader economic elements' relating to the Member suffering such nullification or impairment, i.e. in this case Ecuador.

We believe, however, that the fact that the latter criterion relates to the suspension of concessions or other obligations is not necessarily an indication that "broader economic consequences" relate exclusively to the party which was found not to be in compliance with WTO law, i.e. in this case the European Communities. As noted above, the suspension of concessions may not only affect the party retaliated against, it may also entail, at least to some extent, adverse effects for the complaining party seeking suspension, especially where a great imbalance in terms of trade volumes and economic power exists between the two parties such as in this case where the differences between Ecuador and the European Communities in regard to the size of their economies and the level of socio-economic development are substantial."²⁴²

5.89 Accordingly, the "broader economic elements related to the nullification or impairment" to be taken into account in this case are those relating to the nullification or impairment arising for Brazil from the subsidies at issue, while the broader economic consequences of the suspension may include a consideration of the economic consequences of the suspension both for Brazil and for the United States.

5.90 The terms of subparagraph (d), which require these elements to be taken into account in applying the principles of subparagraph (c), make it clear that an assessment of whether same-sector or same-agreement suspension is "not practicable or effective" and of whether "the circumstances are serious enough" may legitimately, and indeed *should*, take into consideration not only the trade to which the suspension would apply, but also the economic consequences arising from the suspension.

5.91 With these considerations in mind, we now turn to consider whether a plausible determination that it is not practicable or effective to suspend obligations in trade in goods alone could be made in this case, and that the circumstances are serious enough, so that an authorization to suspend concessions or other obligations also under the TRIPS Agreement and the GATS could be given.

2. Factual assumptions

5.92 As we have found above, our mandate requires us to consider whether Brazil has followed the procedures and principles of Article 22.3 of the DSU, in determining that it is not practicable or

²⁴¹ Decision by the Arbitrator, *US – Gambling (Article 22.6 – US)*, para. 4.34.

²⁴² Decision by the Arbitrators, *EC – Bananas III (Ecuador) (Article 22.6 – EC)*, paras. 85-86. See also Decision by the Arbitrator, *US – Gambling (Article 22.6 – US)*, para. 4.35.

effective to suspend concessions in trade in goods and in the agreements of Annex 1A and that the circumstances are serious enough.

5.93 In making its determinations, Brazil assumed that the countermeasures would be in the amount that it had requested, namely, a total of US\$1.037 billion in relation to the actionable subsidies at issue in these proceedings (ML and CCPs). We have determined, however, that countermeasures in an amount of US\$147.3 million annually would be "commensurate with the degree and nature of the adverse effects determined to exist" in this case.

5.94 In addition, our determination in these proceedings takes place against the background of another arbitration proceeding concerning prohibited subsidies, in which Brazil had requested countermeasures in the amount of US\$1.294 billion annually for the GSM 102 programme and US\$350 million for the Step 2 programme. The arbitrator in those proceedings has determined that countermeasures in the amount of US\$147.4 million²⁴³ would be "appropriate" within the meaning of Article 4.10 of the *SCM Agreement*.²⁴⁴

5.95 These circumstances raise two questions for our consideration. First, we must consider whether, for the purposes of our assessment, we must take into account the cumulated amount of countermeasures resulting from both proceedings or only the amount arising from this Decision. Secondly, we must consider what are the implications of the fact that Brazil has assumed, in making its determination, an amount of countermeasures significantly in excess of the amount that has been determined to be permissible.

(a) Whether it is appropriate to consider the cumulated amount of countermeasures arising from both proceedings

5.96 Although the arbitral proceedings relating to the prohibited and actionable subsidies respectively were conducted in parallel, they relate to different aspects of the DSB's findings in this dispute and are legally distinct. In both cases, Brazil has requested an authorization to apply the proposed countermeasures in the form of suspension of obligations under the GATS and the TRIPS Agreement, as well as under trade in goods. The question therefore arises as to the extent to which the Arbitrator in these proceedings must take into account the determinations of the arbitrator in the other proceedings, in assessing whether Brazil has followed the principles and procedures of Article 22.3 of the DSU.

5.97 Brazil considers that the amount of countermeasures on prohibited subsidies and the amount of countermeasures for actionable subsidies should be cumulated in considering whether suspension of concessions or obligations in the goods sector is practicable or effective. Brazil observes that the total amount of countermeasures is part of the objective reality in which the Member operates and in which it undertakes its consideration of the practicability or effectiveness of the countermeasures under Article 22.3 of the DSU.²⁴⁵

5.98 The United States argues that, since the Arbitrator should issue two separate reports to reflect the two separate arbitration proceedings, separate assessments of Brazil's requests for countermeasures under the GATS and the TRIPS Agreement would be needed.²⁴⁶ However, the United States also considers that the Arbitrator in each proceeding may consider the circumstances of the other proceeding. Consequently, the Arbitrator in one proceeding may take account of

²⁴³ We note that this is not a fixed amount, so it may vary over time. However, at this stage of our analysis, we find it appropriate to rely on the amount that has been calculated in relation to FY 2006.

²⁴⁴ See WT/DS267/ARB/1, para. 4.278.

²⁴⁵ Brazil's responses to questions from the Arbitrator, question 9, para. 133.

²⁴⁶ US responses to questions from the Arbitrator, question 9, para. 47.

countermeasures awarded in the other proceeding in determining if the total of the countermeasures in the two proceedings together would justify suspending concessions under another sector or agreement.²⁴⁷

5.99 We first take note of the parties' agreement that, even in the context of separate assessments under the two proceedings, the Arbitrator in each proceeding would be entitled, in the circumstances of this case, to take account of the amount of countermeasures awarded in the other proceedings.

5.100 The determinations arising from this Decision are only in relation to the countermeasures concerning the subsidies covered by these proceedings, namely Brazil's proposals in relation to the marketing loan and countercyclical payments. At the same time, we agree that it is appropriate for us to take into account the amount of countermeasures to which Brazil is entitled to under the other proceedings. As Brazil has expressed it, the amount of countermeasures determined in the other proceedings is "part of the objective reality in which the Member operates". We assume that both amounts would be applicable at the same time and that the two amounts of countermeasures would potentially be applied cumulatively by Brazil. This circumstance may have an impact on an assessment of whether it is "practicable or effective" to seek countermeasures in the same sector or the same agreement and whether "the circumstances are serious enough". As observed above, the parties agree that we can adopt a cumulative approach in this case.²⁴⁸

5.101 We will therefore take into account the cumulated level of countermeasures arising from both decisions, which amounts to US\$294.7 million annually, in reviewing whether Brazil has followed the principles and procedures of Article 22.3 of the DSU in determining that it is not practicable or effective to seek to suspend concessions or other obligations in trade in goods alone and that the circumstances are serious enough.

(b) Implications of the difference between the level of countermeasures requested by Brazil and the level determined to be permissible

5.102 The amount of the countermeasure is a central aspect, possibly the most critically important aspect, of the consideration required to be undertaken by a complaining Member in following the principles and procedures of Article 22.3 of the DSU.

5.103 In these proceedings, Brazil has assumed, in applying the procedures and principles of Article 22.3, that it would be entitled to a total amount of countermeasures in the amount of US\$2.681 billion (US\$1.644 billion in relation to the prohibited subsidies plus US\$1.037 billion in relation to the actionable subsidies). However, as we have determined above, the cumulated amount of countermeasures to which Brazil is entitled to is US\$294.7 million.

5.104 In this case, the amount of countermeasures that we have determined to be permissible is significantly lower than the amount assumed by Brazil in its request, and this fact alone compels a finding that the complaining party has not followed the principles and procedures of Article 22.3. We must therefore find that in adopting the assumption of a total of US\$2.681 billion of countermeasures as the central "fact" underlying its consideration of Article 22.3, it did not properly consider, or cannot be taken to have properly considered, "the necessary facts objectively". Consequently, it cannot have properly applied the principles and procedures of Article 22.3 on the basis of these facts. Therefore our finding must be that Brazil has not followed the principles and procedures as laid out in that Article.

²⁴⁷ US responses to questions from the Arbitrator, question 9, para. 48.

²⁴⁸ See para. 5.99.

5.105 It is not possible to go "back in time" for Brazil to rectify its request for the purposes of these proceedings, taking into account our determination relating to the permissible amount of countermeasures.²⁴⁹ However, Brazil will have the right to present a request for countermeasures to the DSB at the level determined in this Decision. Thus it would be both unreasonable and uninformative to say nothing more about the way in which the principles and procedures should be applied to the lower countermeasure calculated by the Arbitrator.

5.106 We recall in this context our determination in paragraph 5.52 above that, should we determine that Brazil has not followed these procedures or principles, we should articulate how the analysis could properly take place to the extent necessary to ensure that Brazil is in a position to apply these procedures and principles "consistent with paragraph 3" and present a request "consistent with the decision of the arbitrator" in a subsequent phase of these dispute settlement proceedings, as foreseen in Article 22.7 of the DSU.

5.107 In light of these considerations, and notwithstanding our determination that Brazil has not followed the principles and procedures of Article 22.3 because it based its determination on an amount of countermeasures which is significantly in excess of the amount we have authorized, we thus now proceed to describe how, in our view, Article 22.3 should be applied in the context of a countermeasure in the amount of US\$294.7 million.

5.108 In conducting this analysis, we will take into consideration the elements and arguments that have been presented to us by Brazil and the United States in these proceedings. We recognize that Brazil applied these arguments to a significantly larger amount of countermeasures. What we aim to determine in our examination of this issue, is whether the considerations that Brazil has brought forward to explain why it considered that it is not practicable or effective to suspend concessions or other obligations solely in trade in goods to the level that it assumed it was entitled to, would justify the same conclusion when applied to the level of countermeasures that we have determined would be "commensurate with the degree and nature of the adverse effects determined to exist".

3. Whether it is practicable or effective for Brazil to suspend concessions in trade in goods

5.109 Although Brazil considers that the countermeasures must be assessed exclusively against the requirements of Article 7.9 of the *SCM Agreement*, Brazil claims that it has, in any event, followed the principles and procedures of Article 22.3 of the DSU. Specifically, Brazil considers that it is not practicable or effective to suspend concessions or other obligations exclusively under trade in goods, and that the circumstances are serious enough to justify suspension of concessions or other obligations under TRIPS and GATS.²⁵⁰ Brazil also argues that it considered the elements under Article 22.3(d) of the DSU.²⁵¹

5.110 The United States argues that the text of the DSU does not explicitly define what countermeasures are "practicable or effective", but the negotiators were clear in their intention that this be a high bar. Brazil does not reach this bar. In the United States' view, Brazil advances a claim for cross-agreement and sector suspension of concessions that is contrary to the Article 22.3 disciplines.²⁵² The United States therefore requests the Arbitrator to reject Brazil's request to suspend

²⁴⁹ This is not to say that a Member could not base its consideration on a range of possible countermeasure amounts, in order to come before an arbitrator in Article 22.6 proceedings and validly say that it did use a range of assumed facts, and arrived at the same or different outcomes in relation to cross-retaliation. In these proceedings that did not happen.

²⁵⁰ Brazil's Methodology Paper, para. 144; Brazil's written submission, para. 499.

²⁵¹ Brazil's written submission, para. 506.

²⁵² US written submission, para. 329.

concessions with respect to TRIPS and GATS for the reason that Brazil does not meet the requirements of Article 22.3.²⁵³

(a) Main arguments of the parties

5.111 Brazil states that it does not consider it adequate to suspend concessions "by creating barriers to Brazilian imports of US goods and thereby imposing additional costs on the Brazilian economy in general."²⁵⁴

5.112 The United States considers that this claim runs headlong into the thoughtful and purposeful design of the DSU system. According to the United States, the treaty negotiators specifically created a system where Members had to first resort to suspension of concessions within the relevant agreement. Suspension of concessions with respect to goods always entails creating barriers to another Member's goods and thereby imposing additional costs on the sanctioning state's economy. The United States argues that the negotiators of the DSU were well aware that suspension of concessions with respect to goods would be painful for both the sanctioned government and the sanctioning government.²⁵⁵ In the United States' view, if the mere fact of additional costs on Brazil's domestic economy were sufficient for suspension of concessions in the same sector to be not practical or effective, it could be argued that any and all violations with respect to goods would warrant cross-agreement suspension of concessions. The United States argues that this approach is not compatible with the fact that designers of the DSU chose to impose disciplines on suspension of concessions.²⁵⁶

5.113 The United States considers that it can demonstrate that Brazil can effectively and practicably suspend concessions with respect to goods, and that any request by Brazil to suspend concessions across sectors or across agreements is not a reasonable and objective assessment of the conditions established by Article 22.3.²⁵⁷ The United States points out that Brazil imports a sufficient amount of goods from the United States to provide practicable and effective suspension of concessions. Between 2005-2007, Brazil imported between US\$15.3 billion to US\$24.6 billion annually in US goods.²⁵⁸ In consumer goods, excluding food and automotive goods, Brazil imported between US\$1.125 billion and US\$1.676 billion annually in the same time period. Including food and automotive goods in the consumer goods category, the level of imports jumps to between US\$1.826 billion and US\$2.717 billion annually.

5.114 According to the United States, the level of bilateral trade between the United States and Brazil is thus sufficient to provide for suspension of concessions with respect to goods alone. Moreover, given Brazil's large and diverse economy and the actual level of nullification and impairment incurred by the US policies at issue, suspension in consumer goods alone should be effective and practicable.²⁵⁹ In the United States' view, the economic size and the diversity of the economy makes it possible for Brazil to suspend concessions in the goods sector without resort to exceptional cross-sector countermeasures.²⁶⁰ In the past, Brazil has proposed suspension of concessions in the amount of US\$3.36 billion only in the goods sector in the *Canada – Aircraft Credits and Guarantees (Article 22.6 – Canada)* dispute. In the United States' view, it is difficult to understand why it was practicable and effective to suspend concessions in the goods sector in that

²⁵³ US written submission, para. 342.

²⁵⁴ Brazil's Methodology Paper, para. 143.

²⁵⁵ US written submission, para. 329.

²⁵⁶ US written submission, para. 330.

²⁵⁷ US written submission, para. 335.

²⁵⁸ Exhibit US-62, US-ITC Export Data to Brazil.

²⁵⁹ US written submission, para. 336. The Arbitrator takes note that these US arguments are made in the context of Brazil's requested amount of countermeasures, i.e., US\$1.644 billion, for prohibited subsidies and US\$1.037 billion for actionable subsidies respectively.

²⁶⁰ US responses to questions from the Arbitrator, question 135, paras. 168-170.

dispute while Brazil considers it is not practicable or effective to suspend concessions in the goods sector in this case.²⁶¹

5.115 Citing the *EC – Bananas III (Ecuador) (Article 22.6 – EC)* arbitration, the United States argues that if a developing country, even one with a relatively small and undiversified economy such as Ecuador, has sufficient bilateral trade in consumer goods to impose suspension of concessions, then it must do so. Only where the government lacks the capacity to suspend concessions in the same agreement does the DSU permit the cross agreement suspension of concessions.²⁶²

5.116 Brazil explains that it would not be feasible or reasonable to apply countermeasures on capital goods, intermediate goods and other essential inputs to the Brazilian economy, which it says comprise 95 per cent of Brazil's imports from the United States. The costs involved in switching suppliers are normally prohibitive for capital goods and intermediate goods. In addition to prices, decisions on the purchase of capital or intermediate goods are conditioned by several factors that severely constrain the ability of producers to switch suppliers. These factors include: (i) long-term contracts cannot be terminated easily or without heavy pecuniary penalties; (ii) capital goods in particular are tailor-made to respond to the specific needs of the producer and are ordered many months or even years in advance; (iii) in most industries, inputs must have the exact technical specifications that match the requirements of the machinery in place. These specifications will be different depending on the brand, origin, age etc. of the machinery that equips assembly lines. As a result, theoretically similar products are not substitutable; (iv) intellectual property protection and intra-company trade determine purchase decisions and curb the ability of producers to change suppliers.²⁶³

5.117 Moreover, Brazil says that its imports of consumer goods from the United States amount to US\$1.27 billion. Of that amount, almost US\$1.1 billion, or 86 per cent, correspond to medical and educational supplies, food, automotive goods and arms, sectors where, according to Brazil, any raising of barriers would entail serious and unreasonable costs to the Brazilian economy.²⁶⁴ In Brazil's view, the profile of Brazilian imports of consumer goods from the United States leaves very little room of manoeuvre for Brazil to adopt countermeasures that target such goods.²⁶⁵

5.118 However, Brazil also considers that of the US\$1.27 billion of annual imports of consumer goods from the United States (in 2007), approximately US\$28.5 million, or 2.2 per cent, can be considered as luxury goods, in relation to which, arguably, the imposition of countermeasures would not be disproportionately costly to Brazil. In Brazil's view, these luxury goods are consumed by a very small share of Brazil's population and an increase in the costs of their importation is likely to generate limited impacts on the Brazilian economy in general.²⁶⁶

5.119 The United States observes that Brazil has failed to explain why, given the availability of alternative sources of supply, the suspension of concessions in the goods sector is not practicable or effective. Rather, the United States argues, Brazil simply takes a broad category of goods out of consideration based on mere assertion.²⁶⁷ The United States considers that the goods sector is "all goods", and that while it may be appropriate to examine the negative impact on particular goods that are necessities, where goods are not necessities or where alternative sources of supply are available,

²⁶¹ US oral statement, para. 71.

²⁶² US written submission, para. 333.

²⁶³ Brazil's responses to questions from the Arbitrator, question 140, para. 334.

²⁶⁴ Brazil's responses to questions from the Arbitrator, question 140, para. 336.

²⁶⁵ Brazil's written submission, para. 516.

²⁶⁶ Brazil's written submission, para. 523.

²⁶⁷ US responses to questions from the Arbitrator, question 135, para. 171.

there is no basis to assert that suspension of concessions for those goods is not practicable or effective.²⁶⁸

5.120 Brazil considers that the United States bears the burden of proving that it is practicable and effective for Brazil to change suppliers when taking countermeasures in the goods sector alone, and that merely identifying that alternative sources of supply exist for some products is not sufficient.²⁶⁹ In this regard, Brazil considers that the United States failed to demonstrate that countermeasures in the goods sector alone is "practicable" and "effective".²⁷⁰

5.121 Brazil considers that the crucial question is not whether alternative sources of supply exist, but whether it would be feasible and sensible for Brazil, in practice, to force its economic agents to switch to other suppliers. Such analysis would have to take into account, among other factors, the US share in Brazil's total imports; the price levels of alternative suppliers; technical specifications and product differentiation; intellectual property and intra-company trade restrictions; and the economic, welfare and inflationary costs resulting from the disruption of production and supply chains.²⁷¹ Brazil considers that the burden is on the United States to explain why and how the US imports can be replaced by imports from other sources, so that it is practicable for Brazil to take countermeasures only in the goods sector.²⁷²

5.122 The United States comments that Brazil focuses on an even narrower scope of products than the arbitrator on *EC – Bananas III (Ecuador) (Article 22.6 – EC)* did. In that dispute, the arbitrator looked at the category of consumer goods because the suspension of concessions on these goods could not cause any direct adverse effects on Ecuador's domestic manufacturing and processing industries. The United States says that there is no reason to exclude such end use products as "books" and "food" (which Brazil indicates as necessity commodities) from the products for applying countermeasures. Also, the United States considers that the potential cost of changing suppliers is not unusual, but an expected result of suspension of concessions. The United States' main point is that Brazil is not constrained to the narrow range of choices of goods as it suggests given that it is one of the world's largest economies and it has many sources of supply.²⁷³

5.123 Brazil further argues that within the very limited scope of consumer goods that Brazil has to target, the costs and welfare-reducing effects resulting from the adoption of countermeasures exclusively in that sector would render such an alternative not practicable. In Brazil's view, the additional costs generated by these measures would add to inflationary pressures – at a time when increasing prices have pointed to a worrying inflationary scenario – and would limit access of Brazilian consumers to these imported goods, negatively affecting Brazil's economy and the welfare of its population.²⁷⁴

5.124 Furthermore, in Brazil's view, any measures that are contrary to the objectives of a developing country to ensure steady and sustainable development; to pursue high growth rates; to fight poverty; and to promote the increased welfare of its population within a stable macroeconomic environment will necessarily be costly and impracticable by definition.²⁷⁵ Brazil also contends that the significantly unbalanced nature of the trade relations between Brazil and the United States, and the considerable economic differences between the two countries, render the suspension of concessions

²⁶⁸ US responses to questions from the Arbitrator, question 135, para. 166.

²⁶⁹ Brazil's responses to questions from the Arbitrator, question 140, para. 337.

²⁷⁰ Brazil's responses to questions from the Arbitrator, question 140, para. 349.

²⁷¹ Brazil's responses to questions from the Arbitrator, question 140, para. 337.

²⁷² Brazil's comments on US responses to questions 135 from the Arbitrator, Paras 394..

²⁷³ US comments on Brazil's responses to questions from the Arbitrator, question 140, paras. 179-181.

²⁷⁴ Brazil's written submission, paras. 517-519.

²⁷⁵ Brazil's written submission, para. 520.

and other obligations under trade in goods alone neither practicable nor effective as a response to the United States' failure to comply with its obligations.²⁷⁶

5.125 In Brazil's view, countermeasures that are simply most likely to add to those costs and effects are not practicable, as the Brazilian Government does not consider that they could be employed in practice.²⁷⁷

5.126 Brazil also considers that countermeasures restricted solely to trade in goods may not have sufficient political influence to press for the United States' withdrawal of the billions in US dollars annually paid subsidies or to remove their adverse effects. Therefore, such countermeasures are not "effective" for the purpose of encouraging compliance.²⁷⁸

5.127 Brazil submits that, at the very least, it "could plausibly arrive at the conclusion that it was not practicable or effective for it to suspend concessions and other obligations" in respect of the importation of goods alone.²⁷⁹ Brazil reiterates that, besides being authorized to take countermeasures under trade in goods, it needs to have the option to suspend concessions or other obligations under TRIPS and GATS. In this regard, Brazil is seeking to take countermeasures that "produce the greatest likelihood of compliance with minimal damage to its own economy", as commented by the United States itself in a DSB meeting adopting the arbitration report in *EC – Bananas III (Ecuador) (Article 22.6 – EC)*.²⁸⁰

(b) Analysis by the Arbitrator

5.128 We recall our determination above that Brazil cannot be taken to have applied a proper consideration of the principles and procedures of Article 22.3, because the amount of the countermeasure it assumed was much greater than the countermeasure determined by the Arbitrator. Nonetheless we have proceeded further, to give guidance whether, on the basis of the level of the countermeasures authorized under this Decision, and in the circumstances of the trade between the two Members involved, an objective and plausible conclusion could be reached that it is "not practicable or effective" to seek suspension in trade in goods alone and that "the circumstances are serious enough".

5.129 We also recall that, as we have explained in our preliminary observations above, we will take into account in our review of Brazil's determinations the amount of countermeasures that we have determined that Brazil is entitled to, in relation to the ML and CCPs (US\$147.3 million), as well as the amount of countermeasures determined to be "appropriate" in the separate proceedings relating to the prohibited subsidies at issue in the underlying dispute (US\$147.4 million). The total amount of countermeasures in relation to which we consider Brazil's determinations is therefore US\$294.7 million.

(i) *Initial observations*

5.130 Brazil observes at the outset that it would not be adequate to suspend concessions "by creating barriers to Brazilian imports of US goods and thereby imposing additional costs on the Brazilian economy in general". The United States responds that suspension of concessions with respect to goods always entails creating barriers to another Member's goods and thereby imposing additional costs on the sanctioning state's economy, and that the DSU negotiators were "well aware

²⁷⁶ Brazil's written submission, para. 521.

²⁷⁷ Brazil's written submission, para. 522.

²⁷⁸ Brazil's written submission, para. 524.

²⁷⁹ Brazil's written submission, para. 526.

²⁸⁰ Brazil's written submission, para. 527; WT/DSB/M/78, paras. 44-45.

that suspension of concessions with respect to goods would be painful for both the sanctioned government and the sanctioning government". If the mere fact of additional cost on Brazil's domestic economy were sufficient for suspension of concessions in the same sector not to be practical or effective, the United States observes, then it could be argued that "any and all violations with respect to goods would warrant cross-retaliation".

5.131 We agree with the United States that "the mere fact of additional cost on Brazil's domestic economy" would not be sufficient, in and of itself, to conclude that suspension of concessions or other obligations is "not practicable or effective" within the meaning of Article 22.3 of the DSU. To the extent that the imposition of a barrier to trade on certain imports inherently generates economic costs on the Member imposing them, the suspension of concessions on trade in goods may always have the potential to cause some harm to the economy of the Member imposing the barriers. To assume that this inherently would justify recourse to cross-retaliation would amount to reading out of Article 22.3 the principle contained in subparagraph (a). Rather, subparagraphs (b) and (c) of Article 22.3 set out the specific circumstances in which a complaining Member may be entitled to seek to suspend concessions in another sector or another agreement, whatever the sector in which the violation was found.

5.132 At the same time, as we have observed in our analysis of the terms "not practicable or effective" above, it is quite possible that the potential costs associated with the suspension of concessions or other obligations in a given sector or under a certain agreement would precisely be of such an extent and magnitude that such suspension is "not practicable or effective". The fact that subparagraph (d) requires a consideration of the "broader economic consequences of the suspension" further confirms, in our view, that it is appropriate and legitimate for the complaining party to take into account the potential costs that may be associated with the suspension, and not simply the legal feasibility of that suspension, in a determination of whether it is "practicable or effective".

5.133 In short, a consideration of the economic costs associated with the suspension is legitimate, but it is not just *any* economic costs associated with the suspension of concessions or other obligations in a given sector or agreement that would justify a conclusion that such suspension would be "not practicable or effective". Rather, the costs at issue would have to be of such extent and magnitude as to render the suspension "not practicable or effective".

5.134 In these proceedings, Brazil has provided general explanations as to the profile of its trade with the United States, which in its view affect its ability to suspend concessions or other obligations in trade in goods, as well as specific explanations why it considers that it would not be practicable or effective to seek to suspend obligations with respect to certain categories of imports of goods from the United States, so that the range of imports that it can actually target is very limited. Finally, Brazil also argues that, even within the range of products that it could target, suspension would not be "practicable or effective", for various reasons. We consider these three aspects in turn.

(ii) *Overall profile of US imports of goods to Brazil*

5.135 Brazil argues that there is a great imbalance of trade between Brazil and the United States, and that its imports account for only a small share 1.7 per cent (or US\$18.7 billion) of total US exports (US\$1.16 trillion). Hence an increase in tariffs imposed on this trade would not sufficiently affect the United States and therefore would be an ineffective response to the continued violation of its obligations in this dispute.²⁸¹

5.136 In Brazil's view, it would be much easier for the United States to redirect 1.7 per cent of its exports to other destinations than for Brazil to find suitable alternative sources for its imports. Brazil

²⁸¹ Brazil written submission, para. 514.

is much more dependent on imports from the United States. Brazil indicates that among the top 20 products in the list of Brazil's imports from the United States, the United States accounts for more than 50 per cent of total Brazilian imports in 12 cases, and greater than 90 per cent of Brazilian imports in five of these products.²⁸² Brazil also presented an exhibit showing that out of the 30 HS chapters in value of imports that represents 96 per cent of total Brazil's imports from the United States in 2007, the US share was above 10 per cent in 26 cases. This share was higher than 20 per cent in 20 cases and above 30 per cent in eight cases.²⁸³

5.137 The United States responds that the difference between the percentage of US imports into Brazil and the percentage of Brazil's imports into the United States is not the question. The question is whether, within trade from the United States that does occur, it would be practicable or effective to impose countermeasures in goods. The United States considers that Brazil, in fashioning its countermeasures, could take into account the difficulty of finding substitute goods from other sources (e.g., focusing on luxury goods to the extent possible, where increased costs would have little impact, and then exploring other goods where substitute goods are available).²⁸⁴ Given the size and diversity of the Brazilian economy, and the availability of goods from other countries or from Brazil itself, Brazil has many tools at its disposal to apply countermeasures within the goods sector.²⁸⁵

5.138 The United States further observes that Brazil is an important market for the United States, which exported between US\$15.3 and US\$24.6 billion annually to Brazil between 2005 and 2007. If Brazil suspends concessions in the goods sector, it would deprive the United States of access to the important Brazilian market. At a time of economic challenges, loss of this large market would lead to a serious economic cost.²⁸⁶

5.139 We take note of the fact that the total annual value of trade in goods from the United States represents more than 15 per cent of Brazilian imports overall, and that this represents less than 2 per cent of total US exports of goods. We are not persuaded, however, that this "imbalance" that Brazil describes in its trade in goods from the United States would in itself be a sufficient basis to conclude that a suspension of concessions or other obligations in relation to such goods would be "an ineffective response", as Brazil argues. In order to arrive at the conclusion that suspension in a given sector or agreement is not "practicable or effective", a more detailed consideration of the possibilities for suspension of concessions or obligations within the range of imports that could potentially be targeted is appropriate, especially where the total level of imports is not insignificant and greatly exceeds the level of permissible countermeasures to which the complaining party is entitled.

5.140 We note that the total value of Brazil's imports of goods from the United States, as estimated by Brazil, is US\$18.7 billion. The United States estimates these imports at between US\$15.3 and US\$24.6 billion annually. Brazil's estimation of the value of its total imports of goods from the United States is therefore within the range cited by the United States.

5.141 These figures suggest that, in principle, Brazil has at its disposal a total value of US\$18.7 billion of US exports that could potentially be subjected to suspension of concessions or other obligations. The question we must now consider is whether Brazil could plausibly have considered that, from those imports, it is not practicable or effective to suspend concessions or other obligations under the agreements on trade in goods alone, to a level of US\$294.7 million. We are aware that Brazil, in making its determination, was assuming that it would be entitled to a total level of suspension significantly in excess of this figure and we have already outlined why it is that we are

²⁸² Brazil's written submission, para. 515.

²⁸³ Brazil's oral statement para. 124.

²⁸⁴ US responses to questions from the Arbitrator, question 68, paras. 202-203.

²⁸⁵ US responses to questions from the Arbitrator, question 68, para. 206.

²⁸⁶ US oral statement, para. 69.

reviewing the application of the principles and procedure of Article 22.3 despite that supervening obstacle to Brazil's claim in the circumstances of this case (i.e. that it did not actually undertake the consideration that it would have had to have done in order to argue its position before the Arbitrator).

5.142 We recall our determination above that whether suspension in a given sector or agreement is "practicable" essentially relates to whether it is available or feasible in practice. This question is in part answered by a consideration of the total level of trade, to which suspension of concessions or other obligations could be applied. To the extent that the total level of imports from the United States exceeds the total value of imports to which suspension could apply, such suspension is at least available in principle. We also recall our determination that whether suspension in a given sector or agreement is "effective" relates more directly to the question of whether the complaining party could effectively make use of the authorization, and that this may in particular depend on the extent to which that party would cause itself significant harm in suspending concessions on the imports concerned, to such an extent that the suspension would not be effective.

5.143 Bearing in mind these general considerations, we now consider Brazil's arguments to the effect that it only has, in fact, limited scope to seek suspension in relation to its imports of goods from the United States.

(iii) *Detailed profile of US imports to Brazil and availability of suspension in relation to various categories of imports*

5.144 Among its US\$18.7 billion of annual imports from the United States, Brazil indicates that 95 per cent is composed of imports of intermediate goods, capital goods, and other essential inputs into Brazil's economy. Brazil argues that the costs involved in switching suppliers are normally prohibitive for capital goods and intermediate goods. Brazil further argues that, of the US\$1.27 billion of annual imports of consumer goods from the United States, almost US\$1.1 billion, or 86 per cent, correspond to medical and educational supplies, food, automotive goods and arms, sectors where any raising of barriers would entail serious and unreasonable costs to the Brazilian economy.²⁸⁷ We consider in turn Brazil's determination relating to capital, intermediate and other input goods, and its determination in relation to consumer goods.

Capital goods, intermediate goods and other goods constituting inputs into Brazil's economy

5.145 Brazil observes that in addition to prices, decisions on the purchase of capital or intermediate goods are conditioned by several factors that severely constrain the ability of producers to switch suppliers, including long-term contracts that cannot be terminated easily or without heavy pecuniary penalties, the fact that capital goods in particular are tailor-made to respond to the specific needs of the producer and are ordered many months or even years in advance, the fact that in most industries, inputs must have the exact technical specifications that match the requirements of the machinery in place, as well as the fact that intellectual property protection and intra-company trade determine purchase decisions and curb the ability of producers to change suppliers.²⁸⁸

5.146 The United States does not specifically comment on Brazil's assessment that suspension of concessions in relation to capital, intermediate or other input goods would not be practicable or effective. The United States generally considers, however, that Brazil takes a broad category of goods out of consideration based on mere assertion, and that "while it may be appropriate to examine the negative impact on particular goods that are necessities, where goods are not necessities or where alternative sources of supply are available, there is no basis to assert that suspension of concessions for those goods is not practicable or effective".

²⁸⁷ Brazil's responses to questions from the Arbitrator, question 140, para. 336.

²⁸⁸ Brazil's responses to questions from the Arbitrator, question 140, para. 334.

5.147 We note that the arbitrator on *EC – Bananas III (Ecuador) (Article 22.6 – EC)* considered a comparable argument in relation to "primary goods and investment goods". In approaching this question, the arbitrator made the following assumption:

"[W]e presume that the suspension of concessions on imports by Ecuador from the European Communities of those types of goods and the imposition of additional tariffs would increase the cost of domestic production in the absence of alternative sources of supply at a similar price".²⁸⁹

5.148 The arbitrator in that dispute then considered whether the European Communities had provided sufficient information and evidence to demonstrate that alternative sources of supply existed for these products at a similar price. It ultimately concluded that the European Communities had not succeeded in rebutting Ecuador's argument that switching to other than EC sources of supply would involve transitional costs of adjusting to those sources of supply, which Ecuador considered were relatively significant for it as a developing country.

5.149 We first note, as the arbitrator on *EC – Bananas III (Ecuador) (Article 22.6 – EC)* did in relation to "primary goods and investment goods", that suspension of concessions in relation to capital, intermediate or other input goods, which constitute direct inputs into domestic production, has the potential to be damaging to economic operators domestically. We also note the arguments presented by Brazil to explain why, in relation to such goods specifically, it may be especially difficult to have recourse to alternative suppliers without significantly upsetting the supply chain.

5.150 We see merit in this argument particularly in relation to capital and intermediate goods, although we consider it may have less force in relation to primary goods which are more homogenous in character. It could be expected that a significant proportion of imports of goods constituting inputs for manufacturing or processing are in the form of such primary goods, for which alternative sources of supply may be more readily available than for certain other more differentiated products.²⁹⁰

5.151 However, the United States has not specifically addressed this question or attempted to rebut Brazil's arguments by identifying such imports. Although the United States has presented a number of examples of products in relation to which Brazil could, in the view of the United States, easily find alternative suppliers, none of these examples appear to relate to capital, intermediate or input goods (except arguably computers, discussed below).²⁹¹ We also note the acknowledgement, by the United States, that it could be appropriate to consider the negative impact of suspension of concessions in relation to goods that are "necessities".

5.152 There remains a question of definition of the scope of capital goods, as far as computers are concerned. Brazil considers that computers, in relation to which the United States argues that Brazil has the opportunity to import from other sources than the United States, are capital goods, in relation to which it would be harmful to retaliate. The United States has not specifically responded to this assertion. The United States has also not indicated what level of imports computers represent.²⁹²

²⁸⁹ Decision by the Arbitrators, *EC – Bananas III (Ecuador) (Article 22.6 – EC)*, para. 91.

²⁹⁰ We note, in this context, that with respect to agricultural goods specifically, Brazil's experts state that: "Agricultural goods are largely undifferentiated, relatively homogeneous and therefore highly fungible." (Annex 1 to Brazil's written submission (the "Sumner-Sundaram Statement", para. 8).

²⁹¹ See US oral statement, para. 70. The United States identifies the following product categories as examples of goods for which alternative sources of supply can be found easily: passenger cars, antibiotics, computers, salmon. See also Brazil's responses to questions from the Arbitrator, question 140, para. 344.

²⁹² We note in this respect that Exhibit US-109, presented by the United States for the purposes of illustrating the US share of imports to Brazil in various product categories, was contested by Brazil, who stated that this table was in fact erroneous and represented the share of that HS chapter in Brazil's imports from the

5.153 In light of the elements presented to us, and in the absence of any sufficiently specific argument of the United States to the effect that suspension in relation to capital goods, intermediate goods or other inputs into the Brazilian economy would be practicable or effective, we accept, for the purposes of our determination, Brazil's position that it would not be practicable or effective to seek to suspend concessions or other obligations in relation to imports of capital, intermediate and other essential inputs into Brazil's economy.

Consumer goods

5.154 Brazil further argues that, of the US\$1.27 billion of annual imports of consumer goods from the United States, almost US\$1.1 billion, or 86 per cent, correspond to medical and educational supplies, food, automotive goods and arms, sectors where any raising of barriers would entail serious and unreasonable costs to the Brazilian economy.²⁹³

5.155 The United States provides different figures for Brazilian imports of consumer goods from the United States. It states that, including food and automotive goods in the consumer goods category, Brazil imported between US\$1.826 billion and US\$2.717 billion annually from the United States between 2005-2007.²⁹⁴ Excluding food and automotive goods, the United States estimates that Brazil imported between US\$1.125 billion and US\$1.676 billion in consumer goods annually in the same time period. In the United States' view, given Brazil's large and diverse economy and the actual level of nullification and impairment incurred by the US policies at issue, suspension in consumer goods alone should be effective and practicable.²⁹⁵

5.156 Neither party provides an explanation for the significant differences in values that they present concerning Brazil's imports of consumer goods from the United States. Apart from the fact that Brazil uses import data and the United States relies on export data, the most likely explanation for the difference is that the parties do not have the same definition of consumer goods. However, it is not possible to confirm this since the United States has provided only an aggregate figure and does not provide a listing of the individual tariffs lines (as Brazil does) of what it considers to be consumer goods.²⁹⁶

5.157 In light of these elements, and given that the United States has not explained why Brazil's classification of consumer goods would be incorrect and provides no detailed list of its own, the Arbitrator assumes, for the purposes of its analysis, that Brazil's figures in respect of consumer goods (as found in Exhibit Bra-754) reflect an adequate classification of such goods (see Table 3). At the same time, we take note of the fact that there is a very significant difference between the two sets of figures presented, and that Brazil's total figure for imports of consumer goods from the United States is more than 50 per cent lower than those presented by the United States, for the same categories of products.

United States, rather than the US share in Brazil's total imports. See Brazil's oral statement, paras. 122-123. The United States did not present alternative figures.

²⁹³ Brazil's responses to questions from the Arbitrator, question 140, para. 336.

²⁹⁴ US written submission, para. 336 and Exhibit US-62.

²⁹⁵ US written submission, para 336.

²⁹⁶ The only specific product category, the classification of which the parties have discussed, is "computers". In response to an argument that Brazil has alternative sources of supply for computers, Brazil has responded that computers are "capital goods", in relation to which it would not be appropriate to suspend obligations. It is therefore possible that the United States classifies computers as "consumer goods", while Brazil has classified them as "capital goods". However, we are not in a position to determine what impact this difference in classification has, in the absence of further information on the level of Brazilian imports of computers from the United States.

5.158 This means that, in principle, assuming that Brazil's figures are accurate, it has at its disposal a total value of at least US\$1.127 billion worth of US imports of consumer goods to which suspension of concessions or other obligations could in principle be applied.

5.159 We also note at the outset the following observations of the arbitrator on *EC – Bananas III (Ecuador)* (Article 22.6 – EC):

"Suspension of concessions with respect to consumer goods cannot cause any direct adverse effects on Ecuador's domestic manufacturing and processing industries. Thus Ecuador's main argument with respect to investment goods and primary goods referred to above cannot apply with respect to consumer goods. It is also true that resulting price increases resulting from the suspension of concessions on consumer goods could cause welfare losses to end-consumers in the country suspending concessions."²⁹⁷

5.160 Similarly, in these proceedings, it cannot be assumed that the types of economic costs that we have accepted would be likely to arise as a result of a suspension affecting capital goods, intermediate goods and other goods constituting inputs into Brazil's economy would be equally relevant to consumer products. While some welfare costs to end-consumers might arise in the event that the suspension leads to price increases, this would only occur if no alternative substitute is available at a comparable price.

5.161 In light of the fact that the value of Brazil's annual imports of consumer goods from the United States (at least US\$1.273 billion) significantly exceeds the total level of countermeasures that it is entitled to take (US\$294.7 million), it would therefore in principle be possible for Brazil to suspend concessions or other obligations entirely in relation to imports of consumer goods from the United States.

5.162 However, Brazil suggests that, out of the US\$1.273 billion of consumer goods that it imports from the United States, a total of only US\$182.8 million would potentially be available for suspension of concessions or other obligations, once the sectors where raising of barriers would entail "serious and unreasonable costs to the Brazilian economy" are deducted.

Table 3: Total Consumer Goods imports from the United States

		(in US\$millions) 2007
Total Consumer Goods Imports from the United States		1,273.1 (=)
<i>Tag*</i>	Description	
Medical	Medicines and other medical or safety products	909.5 (-)
Food	Food Products	88.7 (-)
Books	Books, teaching material and related products	28.9 (-)
Arms	Arms and ammunition	0.6 (-)
Autos	Automobiles and related goods	62.6 (-)
Total minus selected groups of products		182.8 (=)

Source: Exhibit Bra-754

5.163 The United States considers, however, that Brazil has simply taken broad categories of goods out of consideration based on mere assertion, and that, while it may be appropriate to examine the negative impact on particular goods that are necessities, where goods are not necessities or where alternative sources of supply are available, there is no basis to assert that suspension of concessions

²⁹⁷ Decision by the Arbitrators, *EC – Bananas III (Ecuador)* (Article 22.6 – EC), para. 100.

for those goods is not practicable or effective. The United States observes that Brazil's economy is sufficiently diversified, that it could easily turn to other sources of supply, and that the key question is whether alternative sources of supply exist.

5.164 Brazil considers that the crucial question is not whether alternative sources of supply exist, but whether it would be "feasible and sensible for Brazil, in practice, to force its economic agents to switch to other suppliers". Brazil identifies a number of considerations that would be relevant to such an assessment: "the US share in Brazil's total imports; the price levels of alternative suppliers; technical specifications and product differentiation; intellectual property and intra-company trade restrictions; and the economic, welfare and inflationary costs resulting from the disruption of production and supply chains".²⁹⁸

5.165 We agree that the question of whether suspension of concessions or other obligations is "practicable or effective" is not strictly limited to whether alternative sources of supply exist, but involves a broader consideration of whether it would be feasible, in practice, for Brazil to require its economic agents to switch to other operators, taking into account the range of factors that may have a bearing on this question.

5.166 Bearing this general observation in mind, we now consider Brazil's arguments to the effect that suspension of concessions or other obligations on imports of medical and food products, books, arms and automobiles would entail "serious and unreasonable costs". In doing so, we recall that Brazil accepts that in relation to "other" consumer goods, the costs of suspension would not be excessive. This represents an amount of US\$182.8 million of imports of consumer goods from the United States, in relation to which it is undisputed that it would be practicable or effective to suspend concessions or other obligations. The margin between this figure and the amount of authorized countermeasures is small, in relative terms.

5.167 The first category of consumer goods for which Brazil considers that the costs of suspension concessions would be "serious and unreasonable" is "**medicines** and other medical or safety products." This category, according to Brazil, represents a value of US\$909.5 million in annual imports (2007).²⁹⁹ The United States observes that medical sterilizers exported by Brazil exceed the imported amount from the United States in 2007 (US\$4.6 million in imports, US\$1.5 million in exports). The United States further notes that both China and Korea exported about twice as much antibiotics into Brazil as the United States in 2008, by value, and that China and Korea both substantially increased their share of exports to Brazil from the prior year (19.4 per cent to 33 per cent for China and 13 per cent to 31 per cent for South Korea). Brazil responds that a "big share" of purchases of antibiotics is made by the Ministry of Health after arduous price negotiations and following the rules of public procurement. Therefore, Brazil argues, finding other suppliers is not easy, and there are sometimes no alternatives at all. Moreover, Brazil argues, increasing the costs of health care provision will affect the welfare of the people.

5.168 We see merit in Brazil's argument with respect to the specificities of the market and purchasing practices for certain pharmaceutical products, which may make it difficult to freely switch suppliers with respect to such products. We also note that, even within a given category of medicines, such as "antibiotics", products are not necessarily freely interchangeable. Brazil has not provided exact indications, however, as to what proportion of its imports of "medicines and other medical or safety products" is subject to such purchasing practices or requirements, such that would allow us to

²⁹⁸ Brazil's responses to questions from the Arbitrator, question 140, para. 337.

²⁹⁹ See Exhibit Bra-754, reproduced above as Table 3.

ascertain what proportion of such imports would be adversely affected in the event of a suspension of concessions in this sector.³⁰⁰

5.169 Brazil also excludes imports in the "food" and "books" categories from the range of consumer products that could be considered for suspension of concessions. The United States considers that there is no reason to exclude such end use products from the range of products to which countermeasures could be applied.

5.170 With respect to **food products**, where US imports represent a total value of US\$88.7 million, the United States notes for example that US\$1.8 million of sugarless chewing gum is imported. The United States also indicates that under the "food" category, US\$10.071 million of pears and quinces were imported from the United States in 2007, but imports from Argentina jumped from US\$73 million in 2007 to US\$98 million in 2008. Brazil argues that more Brazilians have sufficient income today to buy food items than before and that such social and economic development should be preserved at all costs. However, Brazil accepts that certain items classified as food, could be considered luxury products, though the amount and value of such products is rather limited.

5.171 Brazil therefore essentially argues that, except for a limited range of foods that can be considered as luxury products, food products as a whole should not be targeted because "more Brazilians have sufficient income" than in the past to buy food and this should be preserved. Naturally, if the suspension of concessions or other obligations were to deprive consumers of the opportunity to purchase food, it could legitimately be concluded that such suspension would not be "practicable or effective". However, this would only be the case if there was no opportunity to source the same or substitutable goods from other domestic or imported sources. Brazil has not explained, however, why this would be the case with respect to the entire category of food products.³⁰¹

5.172 With respect to **books**, for which it estimates the total value of imports from the United States at US\$28.9 million, Brazil observes that increased tariffs would be highly detrimental to the policy goal of increased access to education and the improvement of education standards. Also, Article 150 VI (d) of the Federal Constitution exempts printed publications from import taxes, so that it is not practicable to take countermeasure on books. We note that books, almost by definition, are totally differentiated products, such that it may not be possible to assume that one title could easily be substituted for another. However, we also note that many books have a primarily entertainment rather than educational purpose.

5.173 Brazil also considers that the **automotive sector** (for which imports from the United States amount to US\$62.6 million annually) should not be targeted. The United States observes that it accounts for less than 2 per cent of imports to Brazil of passenger cars in 2007-2008, and that auto parts, similarly, range from about 6 to about 8 per cent. Brazil responds that many limitations, including intra-company restrictions, apply to auto parts, making it virtually impossible or extremely costly for this industry to change suppliers. With respect to passenger cars, the main characteristic of

³⁰⁰ We observe that even within this sub-category of consumer goods, there are items where the US share of imports is less than 20 per cent. If one adds up the value of these imports of medical goods, where the US share was below 20 per cent in 2007, the total amounted to US\$193.7 million. The import share is not the only relevant consideration in evaluating the ease of sourcing alternative supplies, as domestic producers may also be potential suppliers. However, neither party has given us information on the US share of the market including domestic products.

³⁰¹ We note that Brazil's imports of food from the United States in 2007 accounted for only 10 per cent of its entire imports of food. Adding up the value of those food imports where the US share was below 20 per cent in 2007 gives an amount of US\$33.2 million. As noted above, the import share is not the only relevant consideration in evaluating the ease of sourcing alternative supplies, as domestic producers may also be potential suppliers. However, neither party has given us information on the US share of the market including domestic products.

trade in this sector, Brazil argues, is intra-company trade. Countermeasures on cars of "General Motor do Brasil", and "Ford do Brasil", for example, are unlikely to be well received by these subsidiaries and will affect their operations in Brazil. Moreover, imports of vehicles from the United States rely on long-established networks of authorized retailers and maintenance services, which make it virtually impossible for importers to easily switch suppliers. In addition, Brazil observes, car sales in Brazil fell more than 40 per cent in December 2008, and given the present crisis affecting the car industry worldwide, the Brazilian Government has adopted several measures to improve the car market conditions including reducing the rates of federal tax on industrialized products. Brazil considers that it is therefore not viable to adopt measures that will distort the car market and prevent consumers from reaping the benefits of such incentives. Finally, Brazil notes that it wishes to maintain the conditions of competition and prices prevailing in Brazilian car market.³⁰² We note that the US share of Brazil's imports in the automotive sector is only 2 per cent, which suggests that only limited competitive pressure could be exerted through such imports. However, we see merit in Brazil's arguments relating to the structure of trade in the automotive sector being such that a suspension could be harmful to Brazilian subsidiaries importing the cars. We also agree that auto parts from different manufacturers are not necessarily substitutable for each other. In light of these elements and in the absence of specific arguments from the United States disputing Brazil's description of the situation on the automotive market in Brazil, we accept Brazil's position that suspension in this sector would entail "serious and unreasonable costs".

5.174 In the **arms** category (annual value of imports from the United States estimated at US\$0.6 million), the United States observes that Brazil has not indicated the extent to which these imported goods are to be used by the police, military, or others in the public service. In response, Brazil indicated that "a very high percentage" of imports are to be used by the police or military and the level of imports of these products is very low as shown by Exhibit Bra-754.³⁰³ This very general indication, however, expressed only in terms of "a very high percentage" does not allow us to ascertain exactly what amount of imports would fall into this category. The total annual value of imports from the United States is in any event very small.

5.175 The United States also observes that exports of **computers** from China to Brazil continue to outpace those from the United States, at 36.7 per cent in 2008 compared to 18.5 per cent. Brazil considers, however, that computers are in the category of "capital goods", and that it would be unreasonable and very costly to impose additional hurdles on the importation of information technology products, as increased costs of information technology products would have widespread effects on the whole economic structure and would have a direct negative impact on the welfare of Brazil's population.³⁰⁴ Since the United States has not sufficiently rebutted Brazil's classification of consumer goods, we do not consider the treatment of computers under this category.

Conclusion

5.176 Overall, in light of the above, we are not convinced that Brazil could plausibly conclude that suspension of concessions or other obligations would entail "serious and unreasonable costs" in the entirety of these various sectors. At best, Brazil has plausibly explained why suspension in relation to *some* imports within these categories of consumer goods might not be practicable or effective.

5.177 We are therefore not convinced that Brazil could plausibly determine, on the basis of the elements presented to us in these proceedings, that it is not practicable or effective to seek to suspend concessions or other obligations in relation to the entirety of the broad range of consumer products

³⁰² Brazil's responses to questions from the Arbitrator, question 140, paras. 345-347.

³⁰³ Brazil's comments on US responses to questions from the Arbitrator, question 135, paras. 395-397.

³⁰⁴ Brazil's responses to questions from the Arbitrator, question 140, paras. 342-344.

that it proposes to exclude from consideration, in particular in the areas where the US share of imports is relatively small.

5.178 In light of the elements presented to us as discussed above, we can accept Brazil's determinations, on the whole, in relation to books and the automotive sector. However, in relation to the categories of medical products, food and arms, we are not persuaded that Brazil could plausibly determine, on the basis of the elements that it has presented to us alone, that suspension would entail "serious and unreasonable costs" in relation to the entire range of products in these sectors.

5.179 We find it useful, in this context, to consider the extent to which it may be expected that Brazil would in fact have alternative sources of supply at its disposal for these remaining product categories, as a further indication of whether Brazil could plausibly determine that it is not practicable or effective to suspend concessions or other obligations on such imports.

5.180 We recognize that within the broad categories of "medicines" and "food", certain products may not be readily substitutable. In particular, we recognize that some medicines, including those that are subject to proprietary rights, may need to be sourced from a specific supplier. We also recall our determination above that we see merit in Brazil's argument that certain medicines, such as antibiotics, are sourced through public procurement in such a manner that a change in supplier may be impracticable. We also note, however, that medical products and food, as a whole and taken together, represent the vast majority of Brazil's consumer goods imports from the United States and that they both contain a very broad range of products. The category "[m]edicines and other medical or safety products" thus include, for example, items such as "[t]ooth brushes, incl. dental-plate brushes".³⁰⁵ In these circumstances, we find that the US share of imports in these product categories as a whole may provide a useful indicator of the likelihood of other sources of supply being available, and thus of the level of substitutability on the market, for these product categories.

5.181 While there is no exact mathematical precision to this determination, we consider that, for the purposes of our assessment in these proceedings, a US share of imports of 20 per cent constitutes a reasonable threshold by which to estimate the extent to which Brazil may be able to find alternative sources of supply for these three remaining categories of consumer goods imports. This does not take into account the fact that the actual market share of US products might be smaller if domestic competition were to be included also, but we have not been provided any figures that would have allowed us to estimate that. In selecting this indicative threshold, we also bear in mind our earlier determinations in relation to other categories of imports. In particular, we recall that we have accepted Brazil's broad assertion that all capital goods, intermediate goods and other inputs in to the Brazilian economy should be excluded from consideration. We have also accepted Brazil's overall classification of consumer goods, including the exclusion of computers from this category. At the same time, in future arbitrations of this nature, a Member arguing against the plausibility of another Member's determination of the practicality and effectiveness of taking countermeasures only within the goods sector might present a more detailed and scientific rebuttal of the determination made by that other Member. In applying a benchmark of 20 per cent, this Arbitrator is not intending to signal that this is the appropriate percentage to use in this kind of analysis in all cases.

5.182 The table below (Table 4) reflects the results of this assessment. It calculates the amount of Brazil's imports of consumer goods from the United States that could be the subject of countermeasures. It is based on data at the 8-digit level of the tariff headings within the relevant consumer good categories, as reflected in Brazil's own submission.³⁰⁶ The calculations proceed as follows. First, it excludes the value of imports of books and autos from the United States reflecting Brazil's determination that suspension of concessions in these sectors would entail "serious and

³⁰⁵ Tariff line 9603.21.00, Exhibit Bra-823.

³⁰⁶ Exhibit Bra-823.

unreasonable costs". Second, it includes imports of "other" consumer goods, which amount to US\$182.8 million, reflecting Brazil's acceptance that in relation to "other" consumer goods, the costs of suspension would not be excessive. Finally, for food, pharmaceutical products and arms, it includes only the import value of those tariff lines where the US share in Brazil's imports is less than 20 per cent. For illustrative purposes, the table also includes the results of the same calculation for a 10 per cent and 30 per cent threshold.

Table 4: Amount of Brazil's imports of consumer goods from the United States that could be the subject of countermeasures
(Millions of dollars)

Item	Threshold Applicable to Food, Medical Products and Arms		
	10%	20%	30%
- Food	\$11.0	\$33.2	\$48.8
- Medical products	\$15.3	\$193.7	\$333.1
- Arms	\$0.0	\$0.0	\$0.0
- Books	\$0.0*	\$0.0*	\$0.0*
- Autos	\$0.0*	\$0.0*	\$0.0*
- Others	\$182.8**	\$182.8**	\$182.8**
All Consumer goods	\$209.1	\$409.7	\$564.6

* In respect of Books and Autos, no amount is included, to take into account our determination that we accept Brazil's position that suspension in these sectors would entail "serious and unreasonable costs".

** In respect of the "Others" category, the total amount of imports from the United States is included, as Brazil accepts that suspension in these sectors would not entail "serious and unreasonable costs".

Sources: Exhibit Bra-754 and Exhibit Bra-823.

5.183 Using the 20 per cent benchmark for the share of the US imports (and not taking into consideration the availability of domestic products that also can substitute imports), the results of this calculation suggest that, even if we were to assume that Brazil would choose not to suspend concessions in any category of imports of capital goods, intermediate goods and other inputs into its economy, and that it would also not suspend concessions in books or the automotive sector, it would still have at its disposal imports of other consumer goods from the United States amounting to a total value of at least US\$409.7 million, from which to suspend concessions or other obligations. This would therefore still leave a value of US imports of consumer goods significantly in excess of US\$294.7 million, to which suspension could be applied.³⁰⁷

5.184 We also recall that, of these US\$409.7 million of consumer goods imports from the United States, Brazil itself concedes that the costs would not be "serious and unreasonable", up to a

³⁰⁷ We also note that Brazil accepts that suspension of concessions in relation to certain items that could be considered luxury products, amounting to a total of US\$28 million, would probably not lead to excessive costs on the Brazilian economy. This amount may partially overlap with other categories, so we have not added it to the figures considered in this section.

level of US\$182.8 million. This means that Brazil would only in fact need to find an additional amount of imports of other goods from the United States to a total value of US\$112.1 million to which to apply the suspension of concessions or other obligations, in order to apply the full level of suspension that it is entitled to, on imports of goods from the United States.

5.185 We further observe that the above calculation is made on the basis of the arguments and information provided by the parties. For the purposes of the calculation, we have accepted Brazil's determinations in relation to capital goods, intermediate goods and other inputs into the economy, and also in relation to various categories of consumer goods. However, our analysis does not imply that Brazil necessarily has to retaliate in the categories in question. It would in fact remain entitled to apply the suspension to any imports of goods that it chooses to target for suspension. Keeping in mind that the overall amount of imports from the United States to Brazil is US\$18.7 billion, and that imports of consumer goods alone represent at least US\$1.273 billion in total, we are confident that, on the basis of what was put before us in these proceedings and at current levels, Brazil has at its disposal a sufficient level and variety of imports from the United States, to which it could apply the suspension that it is entitled to, without incurring "serious or unreasonable costs" to its economy.

(iv) *General considerations*

5.186 Even in relation to the range of imports in relation to which Brazil considers that it could in principle be practicable to retaliate (which it estimates at US\$182.8 million)³⁰⁸, Brazil also argues that such suspension would not be practicable or effective, due to its potential adverse welfare effects in an inflationary environment and also because any measures contrary to Brazil's development objectives should be avoided. Brazil also generally argues that the trade imbalance between the parties would render such suspension ineffective. We therefore now consider these aspects.

General economic and welfare costs

5.187 Brazil considers that "within the very limited scope of consumer goods that it has to target, the costs and welfare-reducing effects resulting from the adoption of countermeasures exclusively in that sector would render such an alternative not practicable".

5.188 As we have observed in paragraph 5.133 above, a consideration of the economic costs associated with the suspension is legitimate, but it is not just *any* economic costs associated with the suspension of concessions or other obligations in a given sector or agreement that would justify a conclusion that such suspension would be "not practicable or effective". Rather, the costs at issue would have to be of such extent and magnitude as to render the suspension "not practicable or effective". We have also already considered in detail Brazil's specific arguments relating to the economic and welfare costs of the suspension of concessions and other obligations on various categories of US imports. Even considering consumer goods alone, our determinations above suggest that, at current levels, Brazil has at its disposal a total value of at least US\$409.7 million of imports of goods from the United States, to which it could apply a suspension.

5.189 This confirms to us that, in principle, Brazil has at its disposal sufficient imports of goods from the United States and elsewhere in order to allow it to suspend concessions on a total value of US\$294.7 million of imports from the United States without incurring significant costs to its economy. We further emphasize that nothing would compel Brazil to apply the suspension of concessions or other obligations "exclusively in that sector". As we have observed in paragraph 5.185 above, Brazil would be entitled to apply the suspension to any imports of US goods that it chooses to target for suspension. As we also observed above, keeping in mind that the overall amount of imports from the United States to Brazil is of US\$18.7 billion, and that imports of consumer goods alone

³⁰⁸ Based on Exhibit Bra-754.

represent at least US\$1.273 billion, we are confident that, on the basis of what was put before us in these proceedings and at current levels, Brazil has at its disposal a sufficient level and variety of imports from the United States, to which it could apply the suspension that it is entitled to, without incurring "serious or unreasonable costs" to its economy.

Inflationary pressure

5.190 Brazil also argues that the adoption of countermeasures exclusively in the small range of consumer goods that it has to target would add to inflationary pressures at a time when increasing prices have pointed to "a worrying inflationary scenario" and would limit access of Brazilian consumers to these imported goods, negatively affecting Brazil's economy and the welfare of its population.³⁰⁹

5.191 As evidence of the threat of inflation, Brazil, points out that all its price monitoring agencies have recorded rising inflation in 2008, whichever measuring standard is used. As an example, it claims that the annualized change in the Broad Consumer Price Index (IPCA), which is used as the standard inflation index by the Brazilian Central Bank, reached 5.9 per cent in 2008.³¹⁰ Brazil contends that this surpassed the inflation target of 4.5 per cent set by the Central Bank.

5.192 As a result of these strong inflationary pressures, it claims that the Brazilian Central Bank has been compelled to consistently raise basic interest rates since the beginning of 2008. After four consecutive increases, yearly basic interest rates reached 13.75 per cent in September 2008, making Brazil one of the countries with the highest real interest rates in the world.³¹¹

5.193 The United States does not dispute that there are costs, including the risk of inflation, from imposing countermeasures on merchandise goods. But it argues that countermeasures are by definition counter to WTO disciplines. Furthermore, given the size and diversity of Brazil's economy, and the availability of goods from other sources or from Brazil itself, it claims that Brazil has many tools at its disposal to apply countermeasures within the goods sector.³¹²

5.194 Brazil has provided sufficient evidence to show that the threat of inflation seriously concerns Brazilian policymakers. The United States has not disputed the magnitude of the inflation rate in the country nor of the successive steps taken by the Central Bank to increase the interest rate. However, we believe that while the risk of price increases from applying countermeasures on merchandise goods exist, it does not rise to a level where Brazil has no room to apply countermeasures on merchandise goods.

5.195 The size of the countermeasures, at current levels, is not large relative to the value of consumer goods imports from the United States. We also note that the inflation index is based on domestic consumption, which is made up predominantly of domestically-produced goods. This suggests that countermeasures on merchandise goods imports may only have a limited impact on inflation given the composition of the basket of goods that enter into the calculation of the inflation index.

Development objectives, imbalance in trade relations and political influence

5.196 Brazil further argues that any measures that are contrary to the objectives of a developing country to ensure steady and sustainable development will necessarily be costly and impracticable by

³⁰⁹ Brazil's written submission, para. 487.

³¹⁰ Brazil's written submission, para. 488.

³¹¹ Brazil's written submission, para. 489.

³¹² US responses to questions from the Arbitrators, question 68, para. 206.

definition, and that the significantly unbalanced nature of the trade relations between Brazil and the United States, and the considerable economic differences between the two countries, render the suspension of concessions and other obligations under trade in goods alone neither practicable nor effective as a response to the US failure to comply with its obligations.

5.197 Finally, Brazil also argues that suspension in the area of trade in goods alone may not have sufficient political influence to press for the United States' withdrawal of the billions of dollars it pays annually in subsidies or to remove their adverse effects, and that, therefore, they are not "effective" for the purpose of encouraging compliance.

5.198 We agree that a complaining Member seeking to suspend concessions or other obligations should not be required to act against its own interests in applying such suspension. However, our findings above suggest to us that Brazil has at its disposal a sufficient range of imports of goods, including consumer goods, from the United States, so as to enable it to suspend concessions in the area of trade in goods alone, without causing itself such economic harm as to render such suspension "not practicable or effective". In the absence of other specific detailed arguments as to why such suspension would otherwise adversely affect Brazil's interests, we conclude that, on the basis of the elements presented to us and at current levels, Brazil could not conclude that suspension in trade in goods alone would not be "practicable or effective". Further, Brazil's insistence that its countermeasures must have "sufficient political influence" from the perspective of the United States to press for the withdrawal of the subsidies and the removal of their adverse effects is misplaced. "Effectiveness" relates to the ability of a Member to have recourse to the authorized remedy, such that it can serve to induce compliance. However, the preference of a Member for a particular type of countermeasure, because it would constitute a more powerful form of persuasion in a political sense, is not a relevant consideration for an arbitrator in these proceedings.

5.199 Our conclusion is not modified by the "significantly unbalanced nature of the trade relations between Brazil and the United States". As we have observed above, the elements presented to us do not suggest that Brazil's dependence on US imports is such that it could not find at least US\$239.6 million worth of imports of goods from the United States in relation to which it would have sufficient alternative domestic or imported sources of supply at its disposal, so as to suspend concessions effectively. In addition, the fact that exports to Brazil only represent a very small proportion of US exports generally does not, in itself, necessarily imply that countermeasures applied to some of these goods would not be "effective" for the purposes of inducing compliance. It would be up to Brazil to identify those US exports in relation to which it would apply the suspension, and to do this in a manner that would make such measures as effective as possible within the limits of the permissible level of countermeasures. In light of the fact that the total value of imports to Brazil from the United States, at current levels, significantly exceeds the level of permissible countermeasures, we see no reason to assume that this would not provide a sufficient margin or discretion for Brazil to target accordingly the specific products to which suspension would be applied.

(v) *Overall conclusion*

5.200 In light of all the above, we conclude that, on the basis of the elements presented to us and at current levels, Brazil could not plausibly have reached the conclusion that it is not practicable or effective to suspend concessions or other obligations in trade in goods alone, even if it had considered the "necessary facts", i.e. taking into account a level of permissible countermeasures not exceeding US\$294.7 million.

5.201 We note, however, that the level of countermeasures that was determined to be permissible under the Decision contained in WT/DS267/ARB/1 is variable. We have based our determinations above on the level of those countermeasures as calculated on the basis of FY 2006 and on the basis of Brazil's imports of consumer goods in the year 2007. Given the volume and composition of Brazil's

imports of consumer goods in the year 2007, we determined that there was at least US\$409.7 million worth of Brazil's imports of consumer goods from the United States that could be the subject of countermeasures ("threshold"). However, in the event that the level of countermeasures that Brazil would be entitled to in a given year³¹³ should increase to a level that would exceed this threshold, updated for the *same* year in a manner described in Section V.C.6 below to account for the change in Brazil's total imports from the United States, then, we find that it would be concluded, on the basis of the elements presented to us, that the suspension of concessions or obligations applied to trade in goods alone would not be "practicable or effective" within the meaning of Article 22.3(c) of the DSU.

5.202 In light of this determination, we must consider further Brazil's determination that "the circumstances are serious enough" within the meaning of Article 22.3 and its consideration of the elements of subparagraph (d) of Article 22.3.

4. Whether "the circumstances are serious enough"

(a) Main arguments of the parties

5.203 Brazil says that, with respect to prohibited subsidies, the granting or maintenance of such subsidies constitutes in itself, at the very least, a strong indication that "circumstances are serious enough". In addition, the seriousness of the breach in the present case is compounded by the specific characteristics of the subsidy at issue. The GSM 102 programme and the guarantees granted thereunder constitute recurrent export subsidies, granted year after year in connection with billions of dollars in agricultural exports in violation of US WTO obligations. Brazil notes that these subsidies have been granted since 1981 and have been distorting international markets on a continuous and cumulative basis for the whole period covered by this dispute (from 1999 up to 2009). The statutory framework of the programme ensures that it is offered continuously and requires that billions of dollars in guarantees be made available every year. Brazil argues that the subsidies are particularly pernicious in light of their stated objective and performance measure, to open high risk markets to US commodities and establish the dominance of US exporters by means of prohibited export subsidies, to the detriment of competing exporters. In a single day, on 6 October 2008, the USDA received applications for ECGs worth US\$3.5 billion. According to a director of CoBank, this enormous amount of applications is a result of "the credit markets seizing up".³¹⁴

5.204 With respect to the actionable subsidies, Brazil considers that the sheer amount of the subsidies granted under the ML and CCP programmes, which have been found to cause adverse effects in the form of significant price suppression in the world market; the repeated refusal of the United States to comply, since 2005, with the rulings and recommendations adopted by the DSB; and the concrete expectation, confirmed in the 2008 Farm Bill, that the same design and structure for the granting of the same subsidies will be maintained in the future also demonstrate that the circumstances are serious enough to justify the types of countermeasures proposed by Brazil.³¹⁵

5.205 Brazil says that these subsidies provide a pernicious predictability for US producers and exporters – who may take for granted that they will enjoy an artificial competitive advantage vis-à-vis other competitors every year – and for producers of the other Members – who have their production and investment decisions negatively affected in the long term by the chilling effect caused by the permanent availability of the US subsidies. Brazil argues that these subsidies constitute a structural element of the world markets for the wide range of products they support, and that the current credit

³¹³ It is understood that this amount is to be calculated taking into account the entirety of the level of countermeasures that Brazil is entitled to at that point in time, arising both from this Decision and from the Decision by the Arbitrator contained in WT/DS267/ARB/1.

³¹⁴ Brazil's written submission, para. 530.

³¹⁵ Brazil's written submission, para. 530.

crisis only heightens their distorting effects. Producers and exporters all over the world, who are struggling to find credit for their operations, have to compete with US producers and exporters that are cushioned from the effects of the crisis by the unlawful subsidies, as the US\$5.5 billion worth of ECGs under the GSM 102 available in FY 2008 strikingly reminds us. In Brazil's view, these features render the circumstances certainly no less than serious enough.³¹⁶

5.206 In Brazil's view, the fact that the United States has revived in the 2008 Farm Bill, under a slightly different disguise, the only subsidy it had eliminated as part of its implementation of the recommendations and rulings of the DSB in the present case – the "Step 2" programme – constitutes additional indication that the circumstances are serious enough.³¹⁷

5.207 The United States argues that "circumstances are serious enough" may refer to the potential consequences for the Member of suspending concessions in the same sector and agreement, or the potential consequences of forgoing the right to suspend concessions".³¹⁸ In the circumstances of this dispute, where Brazil's proposal for countermeasures does not substantiate any adverse effect on Brazil from the measure at issue, it is not clear, in the United States' view, what consequences these would be or whether they would be serious at all.³¹⁹ In the United States' view, Brazil's agricultural sector, and its cotton producers in particular, have been effective competitors worldwide even with the existence of GSM 102, marketing loan payments and countercyclical payments and without any countermeasures, and Brazil's cotton exports have reached record levels in recent years.³²⁰

5.208 Brazil responds that the United States' erroneous legal analysis first equates the meaning of "circumstances" with that of "potential consequences" and then moves on to argue that "potential consequences" means trade damage to Brazil. In Brazil's view, however, there is no legal basis to argue that in selecting the type of countermeasures Brazil must show "any adverse effect on Brazil from the measures at issue" to enable an assessment of whether circumstances are serious enough. In any event, Brazil argues, as regards actionable subsidies, the existence of adverse effects of the measures at issue has already been determined by two panels and the Appellate Body. Brazil notes that, with respect to the GSM 102 subsidies, the two panels and the Appellate Body found that they constitute *prohibited* subsidies – arguably the most egregious violation of WTO disciplines, as can be inferred from the special rules applicable to them – and that they should have been withdrawn *without delay*. Hence, Brazil argues, even under the US flawed and convoluted logic, circumstances would be serious enough because the consequences of maintaining the subsidies in place could not be anything less than serious, as is made clear by the findings, rulings and recommendations of the panels and the Appellate Body in this dispute.³²¹

5.209 Brazil considers that Article 22.3(c) of the DSU can encompass the impact on Brazil of applying countermeasures under trade in goods alone, as well as broader circumstances which surround Brazil's consideration of retaliatory action against the United States' failure to comply with the DSB's recommendations and rulings in this dispute, such as the demonstrated lack of willingness of the United States to comply.³²²

5.210 In the view of the United States, the circumstances surrounding potential countermeasures in services and intellectual property are also a factor. Brazil has not detailed how it might impose such countermeasures; and in fact it is not obligated to do so at this time. Effectively, the United States

³¹⁶ Brazil's written submission, para. 531.

³¹⁷ Brazil's written submission, para. 532.

³¹⁸ US responses to questions from the Arbitrator, question 136, para. 174.

³¹⁹ US responses to questions from the Arbitrator, question 136, para. 174.

³²⁰ US responses to questions from the Arbitrator, question 136, para. 175.

³²¹ Brazil's comments on US responses to questions from the Arbitrator, question 136, paras. 401-402.

³²² Brazil's comments on US responses to questions from the Arbitrator, question 136, para. 403.

argues, if Brazil is authorized to impose countermeasures under these other Agreements it would cause an additional layer of uncertainty for these sectors, with potentially devastating consequences.³²³

5.211 Brazil welcomes the United States' acknowledgement that Brazil "is not obligated" to detail how it might impose countermeasures with respect to services and intellectual property rights.³²⁴ Brazil also notes that the United States, by referring to "potentially devastating consequences",³²⁵ seems to agree with Brazil's view that countermeasures under the TRIPS Agreement and the GATS would be much more effective within the meaning of Article 22.3 of the DSU than countermeasures under trade in goods alone.³²⁶

(b) Analysis by the Arbitrator

5.212 Under Article 22.3(c) of the DSU, in order for suspension of obligations to be permissible, the complaining party is required to have determined that "the circumstances are serious enough", in addition to having determined that suspension under the same agreement is "not practicable or effective".

5.213 We recall our determination in paragraph 5.84 above that an assessment of whether "the circumstances are serious enough" is necessarily a case-by-case assessment depending on the specific circumstances of the case.

5.214 The United States argues that "'circumstances are serious enough' may refer to the potential consequences for the Member of suspending concessions in the same sector and agreement, or the potential consequences of forgoing the right to suspend concessions".³²⁷ In Brazil's view, Article 22.3(c) of the DSU can encompass the impact on Brazil of applying countermeasures under trade in goods alone, as well as broader circumstances which surround Brazil's consideration of retaliatory action against the United States' failure to comply with the DSB's recommendations and rulings in this dispute, such as the demonstrated lack of willingness of the United States to comply.

5.215 As we have determined in paragraph 5.83 above, an assessment of whether circumstances are "serious enough" would legitimately include a consideration of the elements identified in subparagraph (d) of Article 22.3, namely the trade in the sector in which a violation has been found and its importance to the complaining party (in this case, trade in goods, including trade in cotton and other products affected by the measures at issue), as well as "the broader economic elements related to the nullification or impairment and the broader economic consequences of the suspension". At the same time, the assessment is not limited to these factors, and may include other elements, depending on the specific "circumstances" of the case. We therefore agree with Brazil that a determination of whether "the circumstances are serious enough" may in principle encompass both the impact on Brazil of applying countermeasures under trade in goods (i.e. "the broader economic consequences of the suspension") and "broader circumstances which surround Brazil's consideration of retaliatory action" against the US failure to comply with the DSB's recommendations and rulings.

5.216 Brazil considers that a number of elements render the circumstances "serious enough" in this case, including the granting or maintenance by the United States of the prohibited subsidies, the fourfold increase in the transactions supported by the GSM 102 programme in 2009; the continued granting of actionable subsidies and the enactment of 2008 Farm Bill. In Brazil's view, these facts

³²³ US responses to questions from the Arbitrators, question 136, para. 176.

³²⁴ US response to questions from the Arbitrators, question 136, para. 176.

³²⁵ US response to questions from the Arbitrators, question 136, para. 176.

³²⁶ Brazil's comments on US responses to questions from the Arbitrator, question 136, para. 399.

³²⁷ US responses to questions from the Arbitrator, question 136, para. 174.

show that the United States has no intention of complying with the DSB recommendations and rulings. Brazil further argues that the design and structure of the subsidies at issue is such as to create "an artificial competitive advantage for US operators vis-à-vis other competitors every year" to the detriment of producers of other Members "who have their production and investment decisions negatively affected in the long term by the chilling effect caused by the permanent availability of the US subsidies". Brazil argues that these subsidies constitute "a structural element of the world markets for the wide range of products they support", and that the current credit crisis only heightens their distorting effects. Brazil further considers that the conditions that render the circumstances "serious enough" also include the potential effects on Brazil if countermeasures are confined to the goods sector, which will lead to disproportionate costs to the Brazilian economy and to the welfare of its population.³²⁸

5.217 In our view, Brazil's determination that the circumstances are serious enough within the meaning of Article 22.3(c) of the DSU is reasonable in light of the circumstances of the case.

5.218 In this regard, we recall some salient aspects of the findings of the original and compliance panels and of the Appellate Body in relation to the subsidies concerned:

"As we have just indicated, several of the United States subsidies are directly linked to world prices for upland cotton, thereby numbing the response of United States producers to production adjustment decisions when prices are low. *We have readily available information on the record showing us that the price-contingent subsidies in question involve very large amounts of United States government money benefiting United States upland cotton. In our view, the collective operation of these subsidies was akin to a very large, counter cyclical, deficiency payment laced with additional enhancements.* We believe that the structure, design and operation, particularly of the price-contingent subsidies, constitutes strong evidence supporting a finding of price suppression."³²⁹ (emphasis added)

"Given that in most recent years actual market prices have been lower than expected market prices at the time of planting and that the adjusted world price has been below the marketing loan rate, the Panel considers that it is reasonable to conclude that the fact that US cotton producers know that they will receive marketing loan payments whenever the adjusted world price is below the marketing loan rate continues to be an important factor affecting the level of acreage planted to cotton (and thus the level of production), even when, as in MY 2006, the expected market price for upland cotton at the time of planting is higher than the marketing loan rate. The Panel also notes in this regard that according to FAPRI and USDA data, *the projected amount of marketing loan payments in MY 2006 is very significant.*"³³⁰ (emphasis added, footnote omitted)

"First, we recall that the original panel noted that the CCC has access to funds from the US Treasury and benefits from the full faith and credit of the US Government. This is still the case, and *were the GSM 102 programme to incur massive losses, it would have access to additional funds from the US Treasury.*"³³¹ (emphasis added, footnote omitted)

³²⁸ Brazil's comments on US responses to questions from the Arbitrator, question 136, paras. 404-405.

³²⁹ Panel Report, para. 7.1308. See also para. 7.1349 of that report.

³³⁰ Panel Report, *US – Upland Cotton (Article 21.5 – Brazil)*, para. 10.81.

³³¹ Panel Report, *US – Upland Cotton (Article 21.5 – Brazil)*, para. 14.110.

"The Panel considers, in light of the approach taken by the panel and Appellate Body in the original proceeding, that in determining whether the magnitude of the subsidies at issue in this proceeding supports a finding that the effect of these subsidies is significant price suppression, it is necessary to examine this factor in relation to other factors. Thus, the relevance of the magnitude of the subsidies in this connection must also be assessed in light of our analysis above of the structure, design and operation of the subsidies. We recall, in this respect, our conclusion regarding the important revenue-stabilizing effect of these mandatory, price-contingent subsidies. In the latter regard, the evidence before us indicates that marketing loan and counter-cyclical payments play a significant role in stabilizing the revenues of US upland cotton producers. *The share of marketing loan payments and counter-cyclical payments in total revenues of US upland cotton producers was 35 per cent in MY 2004 and 27 per cent in MY 2005.*"³³² (emphasis added, footnotes omitted)

"Table 6B shows market revenue from cotton lint, total costs (less ginning costs) and the difference between market revenue and total costs on a per acre basis in MY 2002-2006. Over the period examined, US cotton producers' market revenue exceeded total costs of production twice, in MY 2003, when cotton prices were at their highest since MY 1997, and also in the year immediately following that. *In other marketing years, total costs of production exceeded market revenue, at times by very huge margins.* In MY 2002, for example, total costs exceeded market revenue by 84 per cent. Data provided by Brazil for MY 2006 suggests that total costs will continue to exceed market revenue. The gap is expected to be about 56.25 dollar per acre, which would be equivalent to about 14.7 percent of US cotton producers' market revenue in that marketing year. *Cumulated over the five marketing years 2002-2006, US cotton farmers' costs of production have exceeded market revenues by an average of 227.49 dollars per acre.*"³³³ (emphases added)

"In conclusion, the Panel finds that there exists a significant gap between the total costs of production of US upland cotton producers and their market revenue. The Panel considers that this gap between costs and revenue, when analyzed in conjunction with the magnitude of the marketing loan and counter-cyclical subsidies and their importance as a share of the revenue of US cotton producers, *supports the proposition that the marketing loan and counter-cyclical payments are an important factor affecting the economic viability of US upland cotton farming.* The Panel therefore also considers that without these subsidies the level of US upland cotton acreage and production would be considerably lower."³³⁴ (emphasis added, footnotes omitted)

"We do not see a contradiction between the fact that United States shares of world production and exports of upland cotton have remained stable at consistently high levels between MY 2002 and MY 2007 and the Panel's findings of substantial proportionate influence of the United States in the world market for upland cotton. This is because *stable high United States shares of world production and exports of upland cotton could be seen as evidence of the fact that the United States continued to exert a substantial proportionate influence* in the period examined by the Panel, just as it had during the period examined by the original panel. We also observe that the Panel specifically noted that this element supported its finding of significant price suppression when "analysed in the light of the totality of the evidence". Therefore, we

³³² Panel Report, *US – Upland Cotton (Article 21.5 – Brazil)*, para. 10.111.

³³³ Panel Report, *US – Upland Cotton (Article 21.5 – Brazil)*, para. 10.190.

³³⁴ Panel Report, *US – Upland Cotton (Article 21.5 – Brazil)*, para. 10.196.

do not consider that the Panel erred in finding that *the United States exerts a substantial proportionate influence on the world market for upland cotton.*"³³⁵
(emphasis added, footnotes omitted)

5.219 We are not persuaded that, as Brazil argues, the very granting of the subsidies at issue would be sufficient to conclude that the circumstances are "serious enough". It is inherent in the situation at hand that a violation has taken place and that compliance has not been achieved in a timely manner. This circumstance alone, which is common to all cases in which suspension of obligations is sought under the DSU, would not in our view justify the conclusion that the circumstances are "serious enough". However, we agree with Brazil that the specific design and structure of the subsidies at issue, as they have been maintained over a significant period of time, is such as to have created an artificial and persisting competitive advantage for US producers over all other operators, and that this has a significant trade-distorting impact, not just on the US domestic market, but on the world market in these products.

5.220 The United States responds that Brazil has in fact remained very competitive in the agricultural sector, including cotton, even with the US subsidies in place and without countermeasures. We are not persuaded, however, that this consideration alters the essence of the situation. The fact that Brazil may have remained competitive in spite of the trade-distorting conditions arising from the granting and maintenance of the subsidies at issue does not in essence modify the fact that these subsidies have a trade-distorting impact on the world market for cotton and the other products affected by them. Given the structure and design of the programmes at issue, and in light of the time period over which they have been in place, these distortions are virtually, as Brazil puts it, a "structural" element of the world market for the affected products, including cotton, as long as they remain available. Our earlier determinations in relation to the level of permissible countermeasures suggest that these trade-distorting effects are not insignificant, including on Brazil. Furthermore, these impacts are felt not only on the US market but on other markets for the products at issue. In addition, as Brazil observes, in times of credit crisis, this trade-distorting impact will be further amplified, at least in so far as the GSM 102 programme is concerned. These considerations, in our view, support the conclusion that "the circumstances are serious enough".

5.221 In addition, Brazil observes that the disproportionate adverse impact of the suspension of concessions or other obligations on its economy, if applied only to trade in goods, also contributes to the "circumstances" being "serious enough". We agree that this may also be a relevant consideration in such determination.³³⁶ We have considered extensively Brazil's arguments concerning the potential adverse impact on its economy of a suspension applied to trade in goods alone, in reviewing whether it is "practicable or effective" for Brazil to seek suspension in trade in goods alone. In this context, we concluded that, to the extent that the level of countermeasures that Brazil would be entitled to take would exceed a certain threshold, such suspension would be "not practicable or effective". These considerations also inform the determination of whether "the circumstances" would be "serious enough" to justify cross-agreement suspension. If the threshold were reached, such that suspension of concessions or other obligations under the same sector or agreement would not be practicable or effective for Brazil, this would also directly contribute to the circumstances being "serious enough" to justify recourse to suspension under another agreement.

³³⁵ Appellate Body Report, *US – Upland Cotton (Article 21.5 – Brazil)*, para. 446.

³³⁶ We note in this respect the observation of the arbitrator on *US – Gambling* that the circumstances that justified a determination that "the circumstances are serious enough" in that case could be "directly related to the practicability and effectiveness of suspension under the agreement in which the violation was found (in that case, the GATS). See Decision by the Arbitrator, *US – Gambling (Article 22.6 – US)*, para. 4.115.

5.222 In light of all the above, and on the basis of the elements presented to us, we find that Brazil could reasonably determine that "the circumstances are serious enough" within the meaning of Article 22.3(c) of the DSU.

5.223 In light of our determinations in the previous section above, we note that the two conditions foreseen in Article 22.3(c), i.e. a determination that "it is not practicable or effective" to seek suspension under the same agreement and a determination that "the circumstances are serious enough" would only be met simultaneously in this case whenever the threshold identified in paragraph 5.201 above would be exceeded.

5.224 The United States has suggested that the potential implications of a suspension of obligations under the TRIPS Agreement is also a consideration to be taken into account, in light of the "layer of uncertainty" that may arise from such suspension in the sectors concerned and the "potentially devastating consequences" of such suspension. We recognize that there may be legitimate considerations to which the complaining Member should be attentive in applying any suspension of obligations under the TRIPS Agreement.³³⁷ We are not persuaded, however, that this is a relevant consideration for us to take into account in reviewing the question of whether the "circumstances are serious enough" to justify suspension of obligations under that agreement. We first note that there is no general hierarchy in the DSU as between suspension in various sectors or under various WTO Agreements, such that we should assume that a suspension of obligations under the TRIPS Agreement would be inherently more detrimental to the responding Member than another. The only hierarchy to be found in the DSU in this respect is relative to the sector and agreement in which the violation has been found (thus, in a case involving a TRIPS violation, same-sector suspension would have to be sought first under the TRIPS Agreement). We also note that the level of suspension authorized will be the same whatever sector or agreement it may apply to. We further note that, as the United States itself has observed in these proceedings, Brazil is not obligated at this time to explain in detail how it might impose such countermeasures. This question is, in our view, beyond the scope of this enquiry, and it is not for us to speculate how a suspension of certain obligations under the TRIPS Agreement might be applied by Brazil or to assume that it would have more detrimental consequences than a suspension in another sector or agreement. In fact the United States itself does not explain what "devastating consequences" it is referring to.

5.225 We make no determination in relation to the United States' willingness or unwillingness to comply with the recommendations and rulings at issue. We assume that the United States intends in good faith to promptly comply with these recommendations and rulings. We have also not based our findings on Brazil's arguments relating to the adoption of the 2008 Farm Bill, as such, in relation to which we have made no specific determinations.

5. Brazil's consideration of the elements under subparagraph (d) of Article 22.3

5.226 Subparagraph (d) of Article 22.3 of the DSU requires the complaining party to "take into account", in applying the principles of subparagraphs (a) to (c), two elements:

"(i) the trade in the sector or under the agreement under which the panel or Appellate Body has found a violation or other nullification or impairment, and the importance of that trade to [the complaining] party

(ii) the broader economic elements related to the nullification or impairment and the broader economic consequences of the suspension of concessions or other obligations".

³³⁷ See para. 5.233.

5.227 As we have determined in Section V.C.1(c) above, in the circumstances of this case, this means that what is to be taken into account is "the trade" in all goods under the trade in goods agreement, that is, trade in goods generally, and its importance to Brazil, as well as "the broader economic elements" relating to the nullification or impairment arising for Brazil from the subsidies at issue and the broader economic consequences of the suspension, including a consideration of the economic consequences of the suspension.

5.228 As we have discussed extensively in the preceding sections above, Brazil's determinations that it was not practicable or effective for it to seek to suspend obligations in trade in goods alone and that the circumstances are serious enough, were based importantly on a consideration of the importance to its economy of its trade in goods with the United States, and of the potential consequences of the proposed suspension, which it considers would be disproportionately detrimental to its economy if applied solely to trade in goods. In addition, Brazil has also taken into account the economic impact of the measures on the market of the products affected by the measures at issue.

5.229 In light of these elements, we are satisfied that Brazil has taken into account the relevant elements under subparagraph (d) of Article 22.3 in accordance with the requirements of that provision.

6. Conclusion

5.230 In light of our determinations above, we find that in the event that the level of countermeasures that Brazil would be entitled to in a given year³³⁸ should increase to a level that would exceed the threshold identified in paragraph 5.201 above, updated for the *same* year in a manner described in the next paragraph to account for the change in Brazil's total imports from the United States, then Brazil would be entitled to suspend certain obligations under the TRIPS Agreement and/or the GATS as identified in its request pursuant to Article 7.9 of the *SCM Agreement* and Article 22.2 of the DSU³³⁹, with respect to any amount of permissible

³³⁸ It is understood that this amount is to be calculated taking into account the entirety of the level of countermeasures that Brazil is entitled to at that point in time, arising both from this Decision and from the Decision by the Arbitrator contained in WT/DS267/ARB/1.

³³⁹ See WT/DS267/26. Brazil identifies the following obligations in its request:

With respect to the TRIPS Agreement:

"The following sections of Part II of the Agreement on Trade-Related Aspects of Intellectual Property Rights:

Section 1:	Copyright and related rights
Section 2:	Trademarks
Section 4:	Industrial designs
Section 5:	Patents
Section 7:	Protection of undisclosed information."

With respect to the GATS:

"horizontal and/or sectoral concessions and obligations for all sectors contained in Brazil's Schedule of Specific Commitments (GATS/SC/13) under the General Agreement on Trade in Services. Those sectors are:

1. Business Services
2. Communication Services
3. Construction and Related Engineering Services
4. Distribution Services

countermeasures applied in excess of that figure. In any subsequent year where the level of countermeasures that Brazil would be entitled to falls below this threshold, updated to account for the change in Brazil's total imports from the United States, Brazil would be entitled to suspend concessions or other obligations only in trade in goods.

5.231 As stated in the previous paragraph, in order to determine whether suspension of certain obligations under the TRIPS Agreement or the GATS is permissible in a given year, the threshold should be updated to account for the change in Brazil's total imports from the United States. For year 2008, for example, the updated amount of the threshold would be equal to US\$409.7 million multiplied by $(1 + g_{2008})$, where g_{2008} is the percentage change in the value of Brazil's total imports from the United States between the years 2007 and 2008, or in the absence of the trade data for years 2007 and 2008, the percentage change in the value of Brazil's total imports from the United States based on the last available annual trade statistics.³⁴⁰ In general, the following difference equation and initial condition shall determine the updated amount of the threshold:

$$(2) \quad T_{t+1} = T_t * (1 + g_{t+1}), \quad T_{2007} = \text{US\$409.7 million}$$

where:

T_{t+1} = threshold value in year $t+1$;

T_t = threshold value in year t ;

g_{t+1} = percentage change in the value of Brazil's total imports from the United States between the years t and $t+1$, or in the absence of the trade data for years t and $t + 1$, the percentage change in the value of Brazil's total imports from the United States based on the last available annual trade statistics.

5.232 The "same" year shall mean that the amount of countermeasures, calculated based on the fixed amount awarded under this Decision and the variable amount arising from the Decision by the Arbitrator contained in WT/DS267/ARB/1, shall be compared to the value of the threshold in year 2008 (1 January 2008 to 31 December 2008).

5.233 In light of our determination that Brazil, may, in application of the above, be entitled to suspend certain obligations under the TRIPS Agreement and the GATS, we note the remarks made by the arbitrators on *EC – Bananas III (Ecuador) (Article 22.6 – EC)*, with respect to the suspension of obligations under the TRIPS Agreement³⁴¹, which were also noted by the arbitrator on *US – Gambling (Article 22.6 – US)*.³⁴² We consider these remarks to be relevant also to this case, in that the same considerations will be pertinent to the manner in which Brazil might implement a suspension of its obligations under the TRIPS Agreement in this case.

5.234 In light of the fact that the form of permissible countermeasures may vary over time, we urge Brazil, if and when it submits a revised request for authorization to suspend concessions or other

-
- 7. Financial Services
 - 9. Tourism and Travel Related Services
 - 11. Transport Services"

³⁴⁰ Brazil shall use UN Comtrade data for the purpose of calculating the percentage change of its total imports from the United States.

³⁴¹ Decision by the Arbitrators, *EC – Bananas III (Ecuador) (Article 22.6 – EC)*, Section V, paras. 139-165.

³⁴² Decision by the Arbitrator, *US – Gambling (Article 22.6 – US)*, para. 5.11.

obligations to the DSB in accordance with this Decision, to be as specific as possible about the terms of the measures to be adopted, so as to promote transparency and predictability in this process.

5.235 We also take note of the undertaking by Brazil in its request under Article 4.10 of the *SCM Agreement* and Article 22.2 of the DSU, that:

"Every year, Brazil will notify to the DSB the amount and the form of the suspension of concessions and other obligations in the light of data concerning the operation of the identified programmes in the most recent concluded marketing and fiscal year, as applicable."³⁴³

5.236 We suggest that Brazil also similarly notify the amount and form of the suspension of concessions and other obligations arising from this Decision, with respect to its request under Article 7.10 of the *SCM Agreement* and Article 22.2 of the DSU.

5.237 Finally, like previous arbitrators³⁴⁴, we also note that the United States may have recourse to the appropriate dispute settlement procedures in the event that it considers that the level of concessions or other obligations suspended by Brazil exceeds the level of countermeasures we have determined to be "commensurate with the degree and nature of the adverse effects determined to exist" in this case.

VI. CONCLUSIONS AND AWARD

6.1 For the reasons set out above, the Arbitrator determines that the annual level of countermeasures "commensurate with the degree and nature of the adverse effects determined to exist" in relation to the marketing loan and countercyclical payments amounts to US\$147.3 million.

6.2 We have also determined that Brazil has not followed the principles and procedures of Article 22.3 of the DSU in determining that it is not practicable or effective to suspend concessions or other obligations in trade in goods, and that, at current levels, it could not have plausibly determined that it is not practicable or effective to suspend concessions or other obligations in trade in all goods under the Agreements contained in Annex 1A of the WTO Agreement. We have also found, however, that, in the event that the level of countermeasures that Brazil would be entitled to in a given year³⁴⁵ should increase to a level that would exceed a threshold, as identified in paragraph 5.201 above, updated for the *same* year in a manner described in paragraphs 5.231-5.232 to account for the change in Brazil's total imports from the United States, then, it could be reasonably concluded that it is not practicable or effective for Brazil to suspend concessions or other obligations on trade in goods alone. We have also determined that the circumstances are serious enough and that Brazil has complied with the requirements of subparagraph (d) of Article 22.3.

6.3 In light of these findings, we find that Brazil would be entitled to suspend certain obligations under the TRIPS Agreement and/or the GATS, with respect to any amount of permissible countermeasures applied in excess of the threshold identified in paragraph 5.201 above, updated for the *same* year in a manner described in paragraphs 5.231-5.232 to account for the change in Brazil's total imports from the United States. In any subsequent year where the level of countermeasures that Brazil would be entitled to falls below this threshold, updated to account for the change in Brazil's

³⁴³ WT/DS267/21.

³⁴⁴ Decisions by the Arbitrators, *EC – Hormones (US) (Article 22.6 – EC)*, para. 82; *US – 1916 Act (EC) (Article 22.6 – US)*, para. 9.2; *US – Offset Act (Byrd Amendment) (EC) (Article 22.6 – US)*, para. 4.27; and *US – Gambling (Article 22.6 – US)*, para. 5.12.

³⁴⁵ It is understood that this amount is to be calculated taking into account the entirety of the level of countermeasures that Brazil is entitled to at that point in time, arising both from this Decision and from the Decision contained in WT/DS267/ARB/1.

total imports from the United States, Brazil would be entitled to suspend concessions or other obligations only in trade in goods.

6.4 We have also found that, in determining whether the level of countermeasures that Brazil would be entitled to has increased to an amount that would allow it to suspend certain obligations under the TRIPS Agreement and/or the GATS, the data in Table 4 shall be updated to reflect the amount of imports in the *same* year, as described in paragraph 5.232 above.

6.5 Accordingly, the Arbitrator determines that:

- (a) Brazil may request authorization from the DSB to suspend concessions or other obligations under the Agreements on trade in goods in Annex 1A, at a level not to exceed the value of US\$147.3 million annually.
- (b) In the event that the total level of countermeasures that Brazil would be entitled to in a given year³⁴⁶ should increase to a level that would exceed the threshold described in paragraph 5.201, updated to account for the change in Brazil's total imports from the United States, then, Brazil would also be entitled to seek to suspend certain obligations under the TRIPS Agreement and/or the GATS as identified in footnote 339, with respect to any amount of permissible countermeasures applied in excess of that figure.

³⁴⁶ It is understood that this amount is to be calculated taking into account the entirety of the level of countermeasures that Brazil is entitled to at that point in time, arising both from this Decision and from the Decision contained in WT/DS267/ARB/1.

ANNEX 1

Root Mean Square Error Results and Data

1. Stata log file

```
-----
log: F:\Article 22.6\Final Calculations\Actionable\RMSE.smcl
log type: smcl
opened on: 15 May 2009, 16:18:14
```

```
. use "F:\Article 22.6\Final Calculations\Actionable\RMSE.dta", clear
. regress Farmprice LagFarmprice if Year>=1975&Year<=2005
```

Source	SS	df	MS	Number of obs =	31
Model	557.674474	1	557.674474	F(1, 29) =	6.64
Residual	2434.25281	29	83.939752	Prob > F =	0.0153
				R-squared =	0.1864
				Adj R-squared =	0.1583
Total	2991.92728	30	99.7309094	Root MSE =	9.1619

Farmprice	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
LagFarmprice	.4230483	.1641283	2.58	0.015	.0873683 .7587284
_cons	33.35276	9.584455	3.48	0.002	13.75035 52.95517

```
. regress Farmprice FebFutures if Year>=1975&Year<=2005
```

Source	SS	df	MS	Number of obs =	31
Model	741.187194	1	741.187194	F(1, 29) =	9.55
Residual	2250.74009	29	77.6117272	Prob > F =	0.0044
				R-squared =	0.2477
				Adj R-squared =	0.2218
Total	2991.92728	30	99.7309094	Root MSE =	8.8098

Farmprice	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FebFutures	.4870207	.1575967	3.09	0.004	.1646993 .8093422
_cons	26.6572	10.166	2.62	0.014	5.86539 47.44902

```
. regress Farmprice LagFarmprice if Year>=1985&Year<=2007
```

Source	SS	df	MS	Number of obs =	23
Model	667.012479	1	667.012479	F(1, 21) =	7.36
Residual	1903.19719	21	90.6284377	Prob > F =	0.0130
				R-squared =	0.2595
				Adj R-squared =	0.2243
Total	2570.20967	22	116.827712	Root MSE =	9.5199

Farmprice	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
LagFarmprice	.5101912	.1880608	2.71	0.013	.1190974 .901285
_cons	27.61829	10.75863	2.57	0.018	5.24449 49.9921

. regress Farmprice JanMarFutures if Year>=1985&Year<=2007

Source	SS	df	MS	Number of obs =	23
Model	790.326662	1	790.326662	F(1, 21) =	9.32
Residual	1779.88301	21	84.7563337	Prob > F =	0.0060
				R-squared =	0.3075
				Adj R-squared =	0.2745
Total	2570.20967	22	116.827712	Root MSE =	9.2063

Farmprice	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
JanMarFutu~s	.6679844	.2187505	3.05	0.006	.2130678 1.122901
_cons	14.63084	13.78153	1.06	0.300	-14.02942 43.29109

. log close
log: F:\Article 22.6\Final Calculations\Actionable\RMSE.smcl
log type: smcl
closed on: 15 May 2009, 16:19:39

2. Data

Year	JanMarFutures	FebFutures	Farmprice	LagFarmprice
1960	.	.	30.1	.
1961	.	.	32.8	30.1
1962	.	.	31.7	32.8
1963	.	.	32	31.7
1964	.	.	30.9	32
1965	.	.	29.3	30.9
1966	.	.	21.5	29.3
1967	.	.	26.5	21.5
1968	.	.	23	26.5
1969	.	.	21.9	23
1970	.	.	22.82	21.9
1971	.	.	28.07	22.82
1972	.	.	27.2	28.07
1973	.	.	44.4	27.2
1974	.	.	42.7	44.4
1975	.	44.19	51.1	42.7
1976	.	58.7	63.8	51.1
1977	.	68.23	52.1	63.8
1978	.	59.3	58.1	52.1
1979	.	64.86	63.1	58.1
1980	.	77.36	74.4	63.1
1981	.	82.61	54	74.4
1982	.	71.69	59.1	54
1983	.	67.92	66	59.1
1984	.	72.36	57.5	66
1985	66.5	66.48	56.8	57.5
1986	46.1	46.8	51.5	56.8
1987	54.2	53.45	63.7	51.5
1988	59.8	59.5	55.6	63.7

Year	JanMarFutures	FebFutures	Farmprice	LagFarmprice
1989	60	58.81	63.6	55.6
1990	64.8	65.31	67.1	63.6
1991	66.6	67.69	56.8	67.1
1992	61.1	60.32	53.7	56.8
1993	61.3	61.87	58.1	53.7
1994	70.5	70.61	72	58.1
1995	75.8	75.25	75.4	72
1996	78.6	78.58	69.3	75.4
1997	76.8	76.82	65.2	69.3
1998	72.7	72.15	60.2	65.2
1999	61.1	60.27	45	60.2
2000	61	61.31	49.8	45
2001	57.8	58.63	29.8	49.8
2002	42.7	42.18	44.5	29.8
2003	59.1	59.6	61.8	44.5
2004	67.4	66.81	41.6	61.8
2005	52.9	45.67	47.7	41.6
2006	59.3	.	46.5	47.7
2007	58.8	.	59.3	46.5

Sources: Exhibit Bra-770 and US responses to questions from the Arbitrator, question 7, para. 39.

ANNEX 2

Worksheet 1

Overview

- Worksheet 2 "Instructions for Simulation" contains details for understanding and using the model.
- Worksheet 3 "Param Matrix" contains the parameters to be used in the simulation.
- Worksheet 4 "Model Run" contains the operational simulation model.
- Worksheet 5 "Instructions for Data" contains details for understanding and using the subsequent four spreadsheets.
- Worksheet 6 is based on sheets " γ and P over g" and "Regressions" of Exhibit Bra-17 nov (Annex I).
- Worksheet 7 is based on sheets "dLnG" and "Regressions" of Exhibit Bra-17 nov (Annex I).
- Worksheet 8 contains data on US and ROW production, consumption and exports.
- Worksheets 9 and 10 presents the model results, including the apportioning of adverse effects to Brazil.
- Worksheet 11 contains the regressions results from sheet "Regressions" of Exhibit Bra-17 nov (Annex I).
- Each of the individual spreadsheets also contain instructions and explanations.

Worksheet 2

Instructions for Simulation

1. Enable Macros:
 - (a) The default security setting in Microsoft Excel will likely disable the macro that executes the simulation.
 - (b) To enable the macro and run the simulation, the security level in Microsoft Excel must be reduced.
 - Go to "Options" in the Tools menu.
 - Click on the "Security" tab.
 - Click on "Macro Security".
 - Set security to "Medium" or "Low".
 - (c) If necessary, close and reopen Microsoft Excel.
2. Set parameters in spreadsheet 3 "Input param Matrix".
 - (a) Instructions for data input:
 - (i) Rows 4 and 5 have US and rest-of-world production and consumption shares in the world. These can be obtained from worksheet 8 "US and RoW shares".
 - (ii) Rows 6-9 have US and rest-of-world supply and demand elasticities. These have to be entered manually here.
 - (iii) Row 10 shows $d\ln G$. The $d\ln G$ data is taken from worksheet 7 "dlnG" (row 63) for the partial reductions that apply when ML and CCP subsidies are removed.
 - When pasting from the $d\ln G$ spreadsheet use "Paste Special" and "Values and Number formatting".
 - (iv) Rows 11 and 12 show γ and P/g . Data for these rows is taken from worksheet 6 " γ and P over g ".
 - When pasting from the γ and P/g spreadsheet use "Paste Special" and "Values and Number formatting".
3. Run the model and get results:
 - (a) Copy the entire input parameter matrix (cells B4:H12, in all simulations use the full dimensions of this matrix) out of worksheet 3 "Input Param Matrix" into cells G5:M13 of worksheet 4 "Model Run".

NOTE: It is important to always copy and paste the whole parameter matrix to spreadsheet 4 "Model Run", meaning cells B4:H12, no matter which marketing year.
 - (b) In worksheet 4 "Model Run", click "Run" in order to run a simulation. A macro will copy results into cells C27:M30 of worksheet 4 "Model Run".
 - (c) Click "Switch" to align years into ascending chronological order.
 - (d) To save results they must be copied into a separate sheet or file.

Worksheet 3

Input Parameter Matrix MY 1999-2005 (for instructions *see* below and worksheet 2 "Instructions for simulation")

- Copy from here (B4:H12) to cells G5:M13 in worksheet 4 "Model Run". Always copy the whole area, even if not interested in all years.

	1999	2000	2001	2002	2003	2004	2005
δ_{su}	0.193	0.193	0.206	0.189	0.189	0.192	0.205
δ_{du}	0.112	0.096	0.082	0.074	0.064	0.062	0.051
ϵ_u	0.8	0.8	0.8	0.8	0.8	0.8	0.8
ϵ_r	0.2	0.2	0.2	0.2	0.2	0.2	0.2
η_u	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
η_r	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
dlnG	-0.543	-0.529	-0.519	-0.677	-0.606	-0.571	-0.698
γ	0.633	0.661	0.717	0.698	0.674	0.673	0.676
P/g	1.66	1.77	1.67	0.82	1.37	1.86	1.11

- **Description of parameters:**

- δ_{su} Share of US production in world production (*see* worksheet 8 "US and RoW shares")
- δ_{du} Share of US consumption in world consumption (*see* worksheet 8 "US and RoW shares")
- ϵ_u Elasticity of supply in US
- ϵ_r Elasticity of supply in RoW
- η_u Elasticity of demand in US
- η_r Elasticity of demand in RoW
- dlnG Percentage change in the effective government subsidy (measured as a price-subsidy equivalent; *see* worksheet 7 "dlnG")
- γ overall "coupling factor": degree to which government revenue provides a production incentive relative to revenue from the market (*see* worksheet 6 " γ and P over g")
- P/g Ratio of market revenue to revenue from government subsidy (*see* worksheet 6 " γ and P over g")

- **Instructions for data input (the second step in worksheet 2 "Instructions for simulation"):**

1. Rows 4 and 5 contain US production and consumption shares in the world. The shares currently listed are from the worksheet 8 "US and RoW shares".
2. Rows 6-9 contain US and ROW supply and demand elasticities. These are entered manually.
3. Data for row 10 is taken from the worksheet 7 "dlnG" (row 63) for the partial reductions that apply when the ML and CCP subsidies are removed. This is based on worksheet "dLnG" from Bra-17 nov (Annex I). When pasting from the dlnG spreadsheet use "Paste Special" and "Values and Number formatting".
4. Rows 11 and 12 show γ and P/g. Data inputs are taken from the worksheet 6 " γ and P over g" (rows 34 and 35). This is based on worksheet " γ and P over g" of Bra-17 nov (Annex I). When pasting from the γ and P/g spreadsheet use "Paste Special" and "Values and Number formatting".

Worksheet 4

- This is the simulation sheet. For instructions *see* below and worksheet 2 "Instructions for simulation".
- Before running this spreadsheet, the parameter input matrix should have been copied to cells G5:M13 (from worksheet 3 "Input param. matrix").
- If desired, copy the results from cells H36:N38 into a new spreadsheet.

	A	B	C	D	E	F
4	Input 2005	Parameter	Description			
5	0.205	δ_{su}	is the share of US in world production			δ_{su}
6	0.051	δ_{du}	is the share of US in world consumption			δ_{du}
7	0.8	ϵ_u	is the elasticity of supply in US			ϵ_u
8	0.2	ϵ_r	is the elasticity of supply in ROW			ϵ_r
9	-0.2	η_u	is the elasticity of demand in US			η_u
10	-0.2	η_r	is the elasticity of demand in ROW			η_r
11	-0.698	dlnG	reduction			dlnG
12	0.676	γ				
13	1.11	P/g				
14	0.3779	1- α				
15	0.6221	α				

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
20	1-α			Calculations Price					Quantities supplied, demanded, exported					
21	$(\gamma/(\gamma + P/g))$	α		dln P =	0.062	$\delta_{su}\epsilon_u(1-\alpha)$			dlnSu=	-0.1644		dlnSr=	0.0188	
22	0.3779	0.6221			-0.200	$\delta_{du}\eta_u + (1 - \delta_{du})\eta_r$			dlnDu=	-0.0188		dlnDr=	-0.018764	
23					0.261	$\delta_{su}\alpha\epsilon_u + (1 - \delta_{su})\epsilon_r$			dlnXu=	-0.211631				
24				dln P =	0.09382053				S/X	1.32		dlnXu = dln(Su - Du) = (Su/Xu)dlnSu - (Du/Xu)dlnDu.		
25									D/X	0.33		dlnIu = dln(Du-su) = (Du/Xu)dlnDu - (Su/Xu)dlnSu		

	A	B	C	D	E	F	G	H	I	J	K
28	Results				2005	2004	2003	2002	2001	2000	1999
29	dlnP										
30	dlnSu=										
31	dlnXu=										
32											
33											
34											

switch to get the right chronological order

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
35	Results in reverse order							1999	2000	2001	2002	2003	2004	2005
36	dlnP							4.87%	4.68%	5.40%	10.65%	6.50%	4.89%	9.38%
37	dlnSu=							-9.13%	-8.76%	-9.42%	-20.39%	-12.49%	-9.24%	-16.44%
38	dlnXu=							-11.78%	-11.30%	-12.13%	-26.31%	-16.13%	-11.92%	-21.16%

Worksheet 5

Instructions for Data Input

1. Worksheet 6 " γ and P over g" calculates farmers' expectations of " γ " (overall coupling factor) and "P/g" (ratio of market revenue to revenue from government subsidy), which are then copied into worksheet 3 "Input param matrix".
 - Cells B4:K11 in worksheet 6 " γ and P over g" contain subsidy data.
 - Rows 20 through 23 contain the calculations for the per-unit payment of the PFC, DP, MLA and Crop Insurance Program. These payments are non-price based and thus independent of the expectation values of P, g and γ . Instead, direct payments are based on well-known formulas that are publicized well in advance of the crop year. Actual direct payments each year are used to represent what farmers expected to receive.
 - The resulting per unit payment rates from the four programs are marked in grey highlight and in bold.
 - Rows 27 through 29 show the calculation of the per unit payment rates of the CCP, marketing loan and Step 2 programs based on the regressions of actual payments on futures prices. The per unit rates are in grey highlight and in bold.
 - Rows 31 through 39 show the calculations of γ and P/g based on the payment rates derived using futures prices to model expectations. The resulting P/g and γ are in bold and grey highlight.
 - Because the cells are connected by formulae, any change in subsidy information in cells B4:K11 will also result in a change of outcome for P/g and γ .
 - If one wanted to change the calculation of P/g and γ , one would have to change the subsidy data in B4:K11 (if PFC, DP, MLA or CIS figures were to be changed).
2. Worksheet 7 "dlnG" calculates dlnG, the percentage change in the effective government subsidy (measured as a price-subsidy equivalent). The result is then copied into worksheet 3 "Input param matrix".
 - Worksheet 7 "dlnG" is not linked to worksheet 6 " γ and P over g". So, if the per-unit payment data is updated, the new per unit payment rates (E(P), MLA, CCP, ML, Step 2, DP, etc.) have to be copied into spreadsheet 7 "dlnG" and dlnG has to be recalculated. Do not copy and paste the three lines " γ ", "g", "P/g" from worksheet 6 " γ and P/g" to worksheet 7 "dlnG".
 - Rows 17-50 show the dlnG calculations for each individual program payment.
 - In order to calculate the withdrawal of individual subsidies, proceed in the following manner. The example given here is for ML payments, but it applies to ML and CCP subsidies in the same way.

- The $\ln G$ for the ML program is shown in rows 43-45. In row 43, g_1 stands for total g (government subsidies) without including the ML payment. In row 44, γ_1 stands for a γ (total coupling factor) without having the ML program in place. To obtain this latter number, one must delete row 11 (ML payments) and then copy and paste the new resulting γ (from row 15) into row 44. After that, paste back in the data for ML payments into row 11 and move on to the next program. The resulting figure in row 45 is the $\ln G$ for the ML program.
 - After conducting the same calculations for the CCP subsidies, one can add up the $\ln G$ for the two individual programs into one $\ln G$ for an aggregate of programs.
 - In row 58, the impacts of the removal of CCP and ML subsidies are shown.
 - Rows 60-63 contain the same figures as in row 55-58 times (-1).
 - Results from row 63 are then pasted into the worksheet 3 "Input param. matrix".
3. Worksheet 8 "US and RoW shares" calculates the production and consumption shares of the US in the world, which are copied into rows 4 and 5 of worksheet 3 "Input param matrix" and the ratios US production over US Exports and US Consumption over US exports, which are copied into worksheet 4 "Model Run", cell K24 + K25 (Shares of MY 2005 are used for all years).
 4. Once the input parameter matrix is fully compiled, the data can be inserted in worksheet 4 "Model run" (*see* worksheet 2 "Instructions for simulation"). The output matrix shows the results for $\ln P$, $\ln S_u$, and, less pertinent for the question at hand, $\ln X_u$, for the MY 1999-2005. These percentage changes from the initial equilibrium are then used as data inputs for the calculations in worksheet 9 "Model results MY1999-2005" as indicated.

Expected prices and expected subsidy revenue (using futures prices)

3	Subsidy data*	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
4	Production Flexibility Contract payments (PFC) ¹⁾	699	597	637	616	575	474	436	0	0	0
5	Direct payments (DP) ¹⁾	0	0	0	0	0	0	182	616	615	611
6	Counter Cyclical payments (CCP) ¹⁾	0	0	0	0	0	0	1312	392	1375	1376
7	Market Loss Assistance payments (MLA) ¹⁾	0	0	316	613	612	524	0	0	0	0
8	User Marketing (Step 2) payments ¹⁾	3	390	308	422	236	193	429	350	544	350
9	Marketing Loan Program benefits (ML) ¹⁾	0	29	534	1546	531	2520	871	168	1842	1257
10	Crop insurance subsidy (CIS) ¹⁾	185	67	308	317	426	473	277	279	79	-11
11	Total support	887	1083	2103	3514	2380	4184	3507	1805	4455	3583
12	Value of production	6,125	5,710	3,894	3,665	4,109	2,904	3,676	5,415	4,643	5,470
13	Quantity produced, in million lbs ³⁾	8,838	8,758	6,468	8,145	8,250	9,745	8,260	8,762	11,160	11,467
14	Per unit market revenue \$/lb. ²⁾	\$0.69	\$0.65	\$0.60	\$0.45	\$0.50	\$0.30	\$0.45	\$0.62	\$0.42	\$0.48

The following per-unit calculations refer to the expected per unit rate of the PFC, DP, MLA and CIS programs FAPRI expected production¹⁾

	bales	17.25	18.88	18.67	17.02	16.45	17.44	18.14
	pounds	8,280	9,062	8,962	8,170	7,896	8,371	8,707
PFC ⁴⁾	per unit rates	0.074	0.063	0.053	0.053	0.000	0.000	0.000
DP ⁴⁾	per unit rates	0.000	0.000	0.000	0.022	0.078	0.073	0.070
MLA ⁴⁾	per unit rates	0.074	0.068	0.058	0.000	0.000	0.000	0.000
CIS ⁴⁾		0.025	0.031	0.046	0.046	0.045	0.038	0.024

The following per-unit calculations refer to the expected per-unit rate of CCP, ML and Step 2 subsidies (based on regressions on futures prices)

CCP ⁵⁾	0.000	0.000	0.000	0.137	0.113	0.081	0.137
ML ⁵⁾	0.111	0.108	0.117	0.171	0.113	0.090	0.142
Step 2 ⁵⁾	0.039	0.038	0.039	0.048	0.039	0.035	0.043
E(P)	0.538	0.546	0.525	0.390	0.533	0.591	0.463
PFC ⁴⁾	0.074	0.063	0.053	0.053	0.000	0.000	0.000
DP ⁴⁾	0.000	0.000	0.000	0.022	0.078	0.073	0.070
CCP	0.000	0.000	0.000	0.137	0.113	0.081	0.137
MLA ⁴⁾	0.074	0.068	0.058	0.000	0.000	0.000	0.000
Step2	0.039	0.038	0.039	0.048	0.039	0.035	0.043
Loan	0.111	0.108	0.117	0.171	0.113	0.090	0.142
CIS ⁴⁾	0.025	0.031	0.046	0.046	0.045	0.038	0.024
E(g)	0.32	0.31	0.31	0.48	0.39	0.32	0.42
E(γ) ⁶⁾	0.633	0.661	0.717	0.698	0.674	0.673	0.676
E(P/g) ⁶⁾	1.66	1.77	1.67	0.82	1.37	1.86	1.11

Notes:

* Rows 4-14 are identical to Exhibit Bra-705 (US Upland cotton subsidy, and value of production MY 1996-2005 (\$million and million lbs)).

1) See Exhibit Bra-705.

2) Cotton farm-gate price data available from <http://usda.mannlib.cornell.edu/usda/ers/89004/Table11.xls> (last accessed 10 October 2008).

3) Data taken from worksheet 8 "US and RoW shares".

4) These cotton subsidies do not change with variations in price expectation.

5) The cells in grey highlights depict US cotton farmers' subsidy expectations according to worksheet 11 "Regressions". It is based on sheet "Regressions" in Bra-17 nov (Annex I).

6) The results in grey highlights enter directly into worksheet 3 "Input param matrix".

Worksheet 7

dlnG calculations

Expectations formed using futures prices

4		1999	2000	2001	2002	2003	2004	2005
5	E(P)	0.54	0.55	0.52	0.39	0.53	0.59	0.46
6	PFC	0.07	0.06	0.05	0.05	0.00	0.00	0.00
7	DP	0.00	0.00	0.00	0.02	0.08	0.07	0.07
8	CCP	0.00	0.00	0.00	0.14	0.11	0.08	0.14
9	MLA	0.07	0.07	0.06	0.00	0.00	0.00	0.00
10	Step 2	0.04	0.04	0.04	0.05	0.04	0.04	0.04
11	ML	0.11	0.11	0.12	0.17	0.11	0.09	0.14
12	CIS	0.03	0.03	0.05	0.05	0.04	0.04	0.02
13	g	0.323	0.31	0.31	0.48	0.39	0.32	0.42
14	P/g	1.66	1.77	1.67	0.82	1.37	1.86	1.11
15	γ	0.633	0.661	0.717	0.698	0.674	0.673	0.676
16								
17	PFC							
18	g1	0.25	0.24	0.26	0.42	0.39	0.32	0.42
19	γ 1	0.777	0.793	0.832	0.767	0.674	0.673	0.676
20	dlnG	0.055	0.047	0.035	0.024	0.000	0.000	0.000
21								
22	DP							
23	g1	0.32	0.31	0.31	0.46	0.31	0.24	0.35
24	γ 1	0.633	0.661	0.717	0.720	0.781	0.801	0.762
25	dlnG	0.000	0.000	0.000	0.017	0.075	0.086	0.062
26								
27	CCP							
28	g1	0.32	0.31	0.31	0.34	0.27	0.24	0.28
29	γ 1	0.633	0.661	0.717	0.818	0.787	0.767	0.811
30	dlnG	0.000	0.000	0.000	0.165	0.173	0.152	0.195
31								
32	MLA							
33	g1	0.25	0.24	0.25	0.48	0.39	0.32	0.42
34	γ 1	0.746	0.776	0.824	0.698	0.674	0.673	0.676
35	dlnG	0.090	0.083	0.065	0.000	0.000	0.000	0.000
36								
37	User							
38	g1	0.28	0.27	0.27	0.43	0.35	0.28	0.37
39	γ 1	0.583	0.613	0.676	0.664	0.638	0.632	0.638
40	dlnG	0.188	0.187	0.175	0.143	0.149	0.165	0.153
41								
42	ML							
43	g1	0.21	0.20	0.20	0.31	0.27	0.23	0.27
44	γ 1	0.441	0.478	0.549	0.529	0.540	0.545	0.509
45	dlnG	0.543	0.529	0.519	0.513	0.433	0.419	0.503
46								
47	CIS							
48	g1	0.30	0.28	0.27	0.43	0.34	0.28	0.39
49	γ 1	0.601	0.622	0.668	0.665	0.632	0.629	0.656
50	dlnG	0.124	0.154	0.205	0.139	0.170	0.178	0.086
51								
52	Test	1.00	1.00	1.00	1.00	1.00	1.00	1.00
53								
54								

55	MLA+CCP+ML	0.633	0.612	0.584	0.677	0.606	0.571	0.698
56	MLA+CCP+ML+Step2	0.821	0.799	0.760	0.820	0.755	0.736	0.852
57	Step2	0.188	0.187	0.175	0.143	0.149	0.165	0.153
58	CCP+ML	0.543	0.529	0.519	0.677	0.606	0.571	0.698
59								
60	MLA+CCP+ML	-0.633	-0.612	-0.584	-0.677	-0.606	-0.571	-0.698
61	MLA+CCP+ML+Step2	-0.821	-0.799	-0.760	-0.820	-0.755	-0.736	-0.852
62	Step2	-0.188	-0.187	-0.175	-0.143	-0.149	-0.165	-0.153
63	CCP+ML	-0.543	-0.529	-0.519	-0.677	-0.606	-0.571	-0.698

Notes:

- (i) Worksheet 7 "dlnG" calculates dlnG, the percentage change in the effective government subsidy (measured as a price-subsidy equivalent). The result is then copied into the worksheet 3 "Input param matrix".
- (ii) For input details (rows 5-12), see worksheet 6 " γ and P over g".
- (iii) This spreadsheet is **not** linked to worksheet 6 " γ and P/g". So, if the per-unit payment data is updated or changed, the new per-unit payment rates have to be copied into this spreadsheet (dlnG) and dlnG has to be recalculated.
- (iv) Rows 17-50 show the dlnG calculations for each individual program payment.
- (v) In order to calculate the withdrawal of ML and CCP subsidies, proceed in the following manner.
- The example given here is for The ML payment, but it applies to ML and CCP subsidies in the same way.
 - The dlnG for the ML program is shown in rows 43-45. In row 43, g1 stands for total g (government subsidies) without including the ML payment. In row 44, γ 1 stands for a γ (total coupling factor) without having the ML program in place. To obtain this latter number, one must delete row 11 (ML payments) and then copy and paste the new resulting γ (from row 15) into row 44. After that, paste back in the data for ML payments into row 11 and move on to the next program. The resulting figure in row 45 is the dlnG for the ML program. After conducting the same calculations for the CCP subsidies, one can add up the dlnG for the two individual programs into one dlnG for an aggregate of programs. In rows 58 the resulting sum is presented.
- (vi) Rows 60-63 contain the same figures as in row 55-58 times (-1).
- (vii) Results from row 63 are then pasted into worksheet 3 "Input param matrix".

US and rest-of-world shares in cotton production, consumption and exports

	1999	2000	2001	2002	2003	2004	2005
Production in 1000 480 lb bales^{1,2,3)}							
United States	16,968	17,188	20,303	17,209	18,255	23,251	23,890
World Total	87,964	89,099	98,702	90,991	96,782	121,386	116,590
ROW (World - US)	70,996	71,911	78,399	73,782	78,527	98,135	92,700
Share US in World, in %	19.29%	19.29%	20.57%	18.91%	18.86%	19.15%	20.49%
Share ROW in %	80.71%	80.71%	79.43%	81.09%	81.14%	80.85%	79.51%
Consumption In 1000 480 lb bales^{1,2)}							
United States	10,194	8,862	7,696	7,237	6,266	6,691	5,871
World Total	91,082	92,158	94,278	98,355	98,033	108,586	116,241
ROW (World - US)	80,888	83,296	86,582	91,118	91,767	101,895	110,370
Share US in World, in %	11.19%	9.62%	8.16%	7.36%	6.39%	6.16%	5.05%
Share ROW in %	88.81%	90.38%	91.84%	92.64%	93.61%	93.84%	94.95%
Exports in 1000 480lb bales^{1,2)}							
United States	6,750	6,740	11,000	11,900	13,758	14,436	18,036
World Total	27,195	26,258	29,093	30,325	33,277	35,012	44,935
ROW (World - US)	20,445	19,518	18,093	18,425	19,519	20,576	26,899
Ratio US Production/US Exports⁵⁾	2.51	2.55	1.85	1.45	1.33	1.61	1.32
Ratio US Consumption/US Exports⁶⁾	1.51	1.31	0.70	0.61	0.46	0.46	0.33
Ratio ROW Production/ROW Exports	3.23	3.39	3.39	3.00	2.91	3.47	2.59
Ratio ROW Consumption/ROW Exports	3.96	4.27	4.79	4.95	4.70	4.95	4.10

Notes:

1) *Source:* Panel Report, *US – Upland Cotton (21.5)*, Table 3, and <http://www.fas.usda.gov/psdonline/>.

2) Production, consumption and exports are converted into pounds (lb) in columns L-S.

3) The share of US production in world production (row 13) enters into worksheet 3 "Input param matrix" cells B4:H4.

4) The share of US consumption in world consumption (row 20) enters into worksheet 3 "Input param matrix" cells B5:H5.

5) The ratio of US production over US exports (row 27) enter into worksheet 4 "Model Run" to calculate the approximate change in US exports (dlnXu).

6) The ratio of US consumption over US exports (row 28) enters into worksheet 4 "Model Run" to calculate the approximate change in US exports (dlnXu).

	1999	2000	2001	2002	2003	2004	2005
Production in lb							
United States	8,144,640,000	8,250,240,000	9,745,440,000	8,260,320,000	8,762,400,000	11,160,480,000	11,467,200,000
World Total	42,222,720,000	42,767,520,000	47,376,960,000	43,675,680,000	46,455,360,000	58,265,280,000	55,963,200,000
ROW (World - US)	34,078,080,000	34,517,280,000	37,631,520,000	35,415,360,000	37,692,960,000	47,104,800,000	44,496,000,000
Consumption in lb							
United States	4,893,120,000	4,253,760,000	3,694,080,000	3,473,760,000	3,007,680,000	3,211,680,000	2,818,080,000
World Total	43,719,360,000	44,235,840,000	45,253,440,000	47,210,400,000	47,055,840,000	52,121,280,000	55,795,680,000
ROW (World - US)	38,826,240,000	39,982,080,000	41,559,360,000	43,736,640,000	44,048,160,000	48,909,600,000	52,977,600,000
Exports in lb							
United States	3,240,000,000	3,235,200,000	5,280,000,000	5,712,000,000	6,603,840,000	6,929,280,000	8,657,280,000
ROW	13,053,600,000	12,603,840,000	13,964,640,000	14,556,000,000	15,972,960,000	16,805,760,000	21,568,800,000
ROW (World - US)	9,813,600,000	9,368,640,000	8,684,640,000	8,844,000,000	9,369,120,000	9,876,480,000	12,911,520,000

Model Results MY 1999-2005

1. Model scenario: complete and permanent withdrawal of ML and CCP subsidies.
2. Input parameters: see worksheet 3 "Input param matrix".
3. Price expectations: Futures prices.
4. Coupling factor for CCP is 0.4.

Row	A	B	C	D	E	F	G	H	I
7	Input parameter matrix MY 1999-2005								
8		Source	1999	2000	2001	2002	2003	2004	2005
9	δ_{su}	worksheet 8 "U.S. and RoW shares"	0.193	0.193	0.206	0.189	0.189	0.192	0.205
10	δ_{du}	worksheet 8 "U.S. and RoW shares"	0.112	0.096	0.082	0.074	0.064	0.062	0.051
11	ϵ_u	worksheet 3 "Input param matrix"	0.8	0.8	0.8	0.8	0.8	0.8	0.8
12	ϵ_r	worksheet 3 "Input param matrix"	0.2	0.2	0.2	0.2	0.2	0.2	0.2
13	η_u	worksheet 3 "Input param matrix"	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
14	η_r	worksheet 3 "Input param matrix"	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
15	$dlnG$	worksheet 7 "dlnG"	-0.543	-0.529	-0.519	-0.677	-0.606	-0.571	-0.698
16	γ	worksheet 6 "g and P over g"	0.633	0.661	0.717	0.698	0.674	0.673	0.676
17	P/g	worksheet 6 "g and P over g"	1.66	1.77	1.67	0.82	1.37	1.86	1.11
18									
19	Output matrix MY 1999-2005 (see worksheet 4 "Model run")								
20	Output matrix	Explanation/calculation	1999	2000	2001	2002	2003	2004	2005
21	$dlnP$	Model run output ¹⁾	4.87%	4.68%	5.40%	10.65%	6.50%	4.89%	9.38%
22	$dlnSu$	Model run output ¹⁾	-9.13%	-8.76%	-9.42%	-20.39%	-12.49%	-9.24%	-16.44%
23	$dlnXu$	Model run output ¹⁾	-11.78%	-11.30%	-12.13%	-26.31%	-16.13%	-11.92%	-21.16%
24	$dlnP$	Model run output ¹⁾	4.87%	4.68%	5.40%	10.65%	6.50%	4.89%	9.38%
25	$dlnSr$	$dlnSr = \epsilon_r(dlnP)$	0.97%	0.94%	1.08%	2.13%	1.30%	0.98%	1.88%
26	$dlnDr$	$dlnDr = \eta_r(dlnP)$	-0.97%	-0.94%	-1.08%	-2.13%	-1.30%	-0.98%	-1.88%

Notes:

- 1) See worksheet 4 "Model Run".

Row	A	B	C	D	E	F	G	H	I
31	<i>Model results MY 1999-2005 - US excess production and excess revenue, worldwide adverse effects</i>								
32	US production effects	Explanation/calculation	1999	2000	2001	2002	2003	2004	2005
33	US excess production (lb cotton)	dlnSu*actual US production	-743,597,092	-723,046,405	-918,506,550	-1,683,967,155	-1,094,758,202	-1,031,224,878	-1,885,027,126
34	US excess revenue (USD)	dlnSu*actual US production*actual WP	-\$392,991,063	-\$413,944,067	-\$384,670,543	-\$939,822,069	-\$758,010,579	-\$552,014,677	-\$1,076,350,489
35									
36	Worldwide adverse effects	Explanation/calculation	1999	2000	2001	2002	2003	2004	2005
37	<i>Sales value effect</i>	AE _{SV} =dlnP*actual WP*world Prod. (in lb)	\$877,604,225	\$924,387,671	\$851,429,013	\$2,104,166,093	\$1,697,696,545	\$1,233,867,383	\$2,383,718,532
38	<i>Reduced production effect</i>	AE _{RP} =actual world prod. *(dlnSr)*(1+dlnP)*actual WP	\$184,073,625	\$193,525,744	\$179,485,392	\$465,634,078	\$361,626,110	\$258,848,961	\$521,472,055
39	Total adverse effects	AE_{SV} + AE_{RP}	\$1,061,677,850	\$1,117,913,415	\$1,030,914,405	\$2,569,800,171	\$2,059,322,655	\$1,492,716,344	\$2,905,190,586
		World price (A-Index) 1999-2005							
		Year	1999	2000	2001	2002	2003	2004	2005
		Per unit market revenue \$/lb. P	\$0.53	\$0.57	\$0.42	\$0.56	\$0.69	\$0.54	\$0.57

Source: <http://usda.mannlib.cornell.edu/usda/ers/CWS-yearbook//2000s/2007/CWS-yearbook-12-10-2007.pdf> (Appendix table 14); accessed 10 October 2008

Worksheet 10

Apportioning to Brazil

Adverse Effects (Global Level)	\$2,905,190,586
Brazil's Share	\$147,314,091

Cotton Production

(1000 480 lb bales)

Country/Region	2005/2006
Brazil	4,700
ROW (World less US)	92,689
World	116,579
Brazil's Share of ROW	5.1%

Source: Exhibit US-68 (worksheet "Production").

This spreadsheet contains the regression on future prices, the results, and calculations based on those results.

The resulting expected figures for a specific program were then copied into the spreadsheet "γ and P over g". Those figures are here in bold and with grey background.

1. Regression Results and Expected Market Price

	Average February Price of December Contract	Marketing Year Average Farm Price	Expected Per Unit Market price
1996	0.786	0.693	
1997	0.768	0.652	
1998	0.721	0.602	
1999	0.603	0.450	0.538
2000	0.613	0.498	0.546
2001	0.586	0.298	0.525
2002	0.422	0.445	0.390
2003	0.596	0.618	0.533
2004	0.668	0.416	0.591
2005	0.511	0.477	0.463
2006	0.604		0.539

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.957943
R Square	0.917655
Adjusted R Square	0.907362
Standard Error	0.037467
Observations	10

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	0.125149	0.125149	89.1528	1.3E-05
Residual	8	0.01123	0.001404		
Total	9	0.136379			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	0.04565	0.051091	0.893509	0.397667	-0.07217	0.16	-0.072165174	0.163
X Variable 1	0.816883	0.086515	9.442076	1.3E-05	0.617378	1.02	0.617378453	1.016

2. Regression Results and Expected Step 2 Payment

	Average February Price of December Contract	Step 2, million \$	production, million lbs	payment rate, \$/lb	Expected Per Unit Step 2
1996	0.786	3	8,838	0.000	
1997	0.768	390	8,758	0.045	
1998	0.721	308	6,468	0.048	
1999	0.603	422	7,821	0.054	0.039
2000	0.613	236	8,064	0.029	0.038
2001	0.586	193	9,409	0.021	0.039
2002	0.422	429	7,935	0.054	0.048
2003	0.596	350	8,555	0.041	0.039
2004	0.668	544	10,802	0.050	0.035
2005	0.511	350	11,165	0.031	0.043

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.333198
R Square	0.111021
Adjusted R Square	-0.0001
Standard Error	0.017144
Observations	10

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	0.000294	0.000294	0.999086	0.346802
Residual	8	0.002351	0.000294		
Total	9	0.002645			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	0.069045	0.03223	2.142276	0.064547	-0.00528	0.14	-0.00527693	0.143
X Variable 1	-0.05061	0.050632	-0.99954	0.346802	-0.16737	0.07	-0.167365142	0.066

3. Regression Results and Expected Marketing Loan Program Payment

	Average February Price of December Contract	MLG total, million \$	production, million lbs	payment rate, \$/lb	Expected Per Unit Loan Payment
1996	0.786	0	8,838	0.000	
1997	0.768	29	8,758	0.003	
1998	0.721	534	6,468	0.083	
1999	0.603	1,546	7,821	0.198	0.111
2000	0.613	531	8,064	0.066	0.108
2001	0.586	2,520	9,409	0.268	0.117
2002	0.422	871	7,935	0.110	0.171
2003	0.596	168	8,555	0.020	0.113
2004	0.668	1,842	10,802	0.170	0.090
2005	0.511	1,257	11,165	0.113	0.142
2006	0.604				0.111

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.423526
R Square	0.179375
Adjusted R Square	0.076796
Standard Error	0.084794
Observations	10

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	0.012573	0.012573	1.748663	0.222598
Residual	8	0.05752	0.00719		
Total	9	0.070093			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	0.310755	0.159407	1.949448	0.087066	-0.05684	0.68	-0.056837531	0.678
X Variable 1	-0.33115	0.250421	-1.32237	0.222598	-0.90862	0.25	-0.908621632	0.246

4. Regression Results and Expected CCP payment

	Average February Price of December Contract	CCP, million \$	production, million lbs	payment rate, \$/lb	Expected Per Unit CCP Payment
1996	0.786	0	8,838	0.000	
1997	0.768	0	8,758	0.000	
1998	0.721	385	6,468	0.060	
1999	0.603	1,312	7,821	0.168	
2000	0.613	1,312	8,064	0.163	
2001	0.586	1,312	9,409	0.139	
2002	0.422	1,312	7,935	0.165	0.191
2003	0.596	392	8,555	0.046	0.113
2004	0.668	1,375	10,802	0.127	0.081
2005	0.511	1,376	11,165	0.123	0.151
2006	0.604				0.110

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.754296
R Square	0.568962
Adjusted R Square	0.515082
Standard Error	0.04654
Observations	10

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	0.022872	0.022872	10.55985	0.011708
Residual	8	0.017328	0.002166		
Total	9	0.0402			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	0.379375	0.087492	4.336105	0.002491	0.177618	0.58	0.177617707	0.581
X Variable 1	-0.44664	0.137446	-3.24959	0.011708	-0.7636	-0.1	-0.763595134	-0.13

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*

Decision by the Arbitrator

Corrigendum

Paragraph 5.167, 3rd sentence, should read:

"The United States observes that medical sterilizers exported by Brazil exceed the imported amount from the United States in 2007 (US\$4.6 million in exports, US\$1.5 million in imports)."

* In English only.