

## **PART B**

# **PRELIMINARY RESULTS**

42. This Part outlines the preliminary results that emerge from the application of the QUASAR methodology. It is divided into two sections: the first section describes the salient findings of a global analysis, while the second section contains an account of regional results, in terms of range of ALI, type of ASA, geography of traffic and individual market access features.

43. The main findings of the global analysis are summarised in box B1.

<p><b>Box B1</b> <b>Main findings</b></p> <ul style="list-style-type: none"><li>• Traffic is highly concentrated: 100 ASAs, involving 50 parties, cover two-thirds of total WASA traffic.</li><li>• Plurilateral agreements could, theoretically, have a decisive liberalising impact on one-quarter of the traffic.</li><li>• High-traffic bilateral ASAs are only marginally more liberal than the others.</li><li>• Restrictive features, such as dual approval of tariffs and substantial ownership and effective control, are still largely prevalent in ASAs, at least on paper.</li><li>• Bilateral agreements exhibit a great degree of similarity: just seven types cover 72 per cent of the traffic.</li><li>• An analysis by type reveals a more liberal picture: one out of six passengers travels under liberal conditions and one out of three under liberal or semi-liberal conditions.</li><li>• The key market access provisions of 1424 agreements could be replaced by seven sets of provisions drawn from ICAO's Template Air Services Agreements.</li></ul>
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A. GLOBAL ANALYSIS

**1. Traffic concentration**

(a) Findings

44. An analysis of the traffic covered by bilateral ASAs reveals the following:

- the agreements covering over one million passengers (67 agreements), i.e. 3.4 per cent of all WASA agreements, involve 39 parties<sup>29</sup> and cover 55.7 per cent of the WASA traffic;
- the first 100 agreements ranked by traffic, i.e. 5.1 per cent of all WASA agreements (involving 50 parties)<sup>30</sup>, account for 63.5 per cent of the traffic; and

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<sup>29</sup> Argentina, Australia, Bolivarian Republic of Venezuela, Brazil, Canada, China, Colombia, Costa Rica, Dominican Republic, El Salvador, France, Germany, Hong Kong, China; India, Indonesia, Ireland, Israel, Italy, Jamaica, Japan, Malaysia, Mexico, Morocco, Netherlands, New Zealand, Norway, Philippines, Republic of Korea, Russian Federation, Singapore, South Africa, Spain, Switzerland, Thailand, Tunisia, Turkey, United Arab Emirates, United Kingdom and United States.

<sup>30</sup> The eleven additional parties concerned are: Aruba, Austria, Belgium, Denmark, Ecuador, Guatemala, Netherlands Antilles, Pakistan, Peru, Saudi Arabia and Sweden.

- the first 200 agreements ranked by traffic, i.e. 10.1 per cent of all WASA agreements (involving 76 parties)<sup>31</sup>, account for 77.4 per cent of the traffic.

45. Table B1 lists the 67 agreements covering over one million passengers and the 100 most traffic-intensive agreements. The parties involved in the first 67 agreements are indicated in bold, those involved only in the next 31 in normal font. Parties are listed in alphabetical order, so that each agreement is quoted twice, first for party A and then for party B. For more elements on the agreements concerned (e.g. ALI, distance, traffic range, etc.) see either the Contracting State profiles of the parties concerned (Part C of the present document) or the table listing the main features of the bilateral Air Services Agreements considered in the QUASAR in Annex D-I. Table B1 also lists the bilateral traffic relations of comparable volume which do not appear in WASA.

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<sup>31</sup> The 27 additional parties involved as compared to the top-100 ASAs are: Barbados, Cambodia, Chile, Egypt, Fiji, Finland, Honduras, Kenya, Kuwait, Lebanon, Mauritius, Myanmar, Nepal, Nicaragua, Oman, Panama, Portugal, Romania, Senegal, Serbia and Montenegro, Sri Lanka, Syrian Arab Republic, Trinidad and Tobago, Ukraine, Uruguay, Uzbekistan, Vietnam.

**Table B1**  
**Parties to the top-67 (over one million passengers) and top-100 WASA agreements in terms of traffic, and their traffic relations of similar size not appearing in WASA**

PARTY A	WALI	NUMBER OF ASAS	WASA AGREEMENTS	TRAFFIC RELATIONS NOT APPEARING IN WASA
			PARTY B (TRAFFIC RANGE, ALI)	PARTY B (TRAFFIC RANGE)
Argentina	8.8	19	Brazil (1.5-2 m pax, ALI 10), Spain (0.715-1 m pax, ALI 11), US (0.715-1 m pax, ALI 5)	Chile (1-1.5 m pax)
Aruba	34	1	US (0.715-1 m pax ALI 34)	-
Australia	9	42	China (0.715-1 m pax, ALI 0), Hong Kong, China (1-1.5 m pax, ALI 12), Indonesia (0.715-1 m pax, ALI 6), Japan (1-1.5 m pax, ALI 8), Malaysia (0.715-1 m pax, ALI 6), New Zealand (3.5-4 m pax, ALI 10), Singapore (1.5-2 m pax, ALI 6), Thailand (0.715-1 m pax, ALI 10), United Kingdom (1-1.5 m pax, ALI 14), US (1.5-2 m pax, ALI 8)	-
Austria	10.6	61	Switzerland (0.715-1 m pax, ALI 14)	-
Belgium	12.6	64	US (0.715-1 m pax, ALI 25)	-
Bolivarian Republic of Venezuela	8	14	US (1-1.5 m pax, ALI 10)	-
Brazil	8.8	36	Argentina (1.5-2 m pax, ALI 10), US (2-2.5 m pax, ALI 15)	-
Canada	20.2	45	China (0.715-1 m pax, ALI 6), France (1-1.5 m pax, ALI 10), Germany (0.715-1 m pax, ALI 14), Mexico (0.715-1 m pax, ALI 4), United Kingdom (2-2.5 m pax, ALI 12), US (18-18.5, m pax, ALI 27)	-
China	5.5	73	Australia (0.715-1 m pax, ALI 0), France (0.715-1 m pax, ALI 6), Germany (0.715-1 m pax, ALI 11), Republic of Korea (5.5-6 m pax, ALI 4), Malaysia (1-1.5 m pax, ALI 0), Singapore (2-2.5 m pax, ALI 11), Thailand (1.5-2 m pax, ALI 0), US (2-2.5 m pax, ALI 14)	Japan (6-6.5 m pax); Hong Kong, China (6.5-7 m pax)
Colombia	11.8	11	US (1-1.5 m pax, ALI 15)	-
Costa Rica	22	12	US (1.5-2 m pax, ALI 28)	-
Denmark	15.3	44	US (0.715-1 m pax, ALI 28)	Norway (1-1.5 m pax)
Dominican Republic	28.9	8	US (3-3.5 m pax, ALI 34)	-
Ecuador	12.5	12	US (0.715-1 m pax, ALI 15)	-
El Salvador	33.7	2	US (1-1.5 m pax, ALI 34)	-
France	9.4	60	Canada (1-1.5 m pax, ALI 10), China (0.715-1 m pax, ALI 6), Japan (0.715-1 m pax, ALI 15), Morocco (2-2.5 m pax, ALI 11), Russian Federation (0.715-1 m pax, ALI 0), Switzerland (1-1.5 m pax, ALI 7), Tunisia (1-1.5 m pax, ALI 13)	US (4.5-5 m pax); Algeria (2.5-3 m pax)
Germany	16.4	80	Canada (0.715-1 m pax, ALI 14), China (0.715-1 m pax, ALI 11), Japan (0.715-1 m pax, ALI 10), Norway (0.715-1 m pax, ALI 7), Russian Federation (2-2.5 m pax, ALI 1), Switzerland (2.5-3 m pax, ALI 6), Thailand (0.715-1 m pax, ALI 10), Turkey (3.5-4 m pax, ALI 12), US (7-7.5 m pax, ALI 42)	-
Guatemala	31.7	7	US (0.715-1 m pax, ALI 34)	-

PARTY A	WALI	NUMBER OF ASAS	WASA AGREEMENTS	TRAFFIC RELATIONS NOT APPEARING IN WASA
			PARTY B (TRAFFIC RANGE, ALI)	PARTY B (TRAFFIC RANGE)
Hong Kong, China	13.5	50	Australia (1-1.5 m pax, ALI 12), Japan (2.5-3 m pax, ALI 18), Malaysia (0.715-1 m pax, ALI 12), Philippines (1-1.5 m pax, ALI 12), Singapore (1.5-2 m pax, ALI 12), Republic of Korea (1-1.5 m pax, ALI 12), Thailand (2.5-3 m pax, ALI 12), United Kingdom (1-1.5 m pax, ALI 16), US (1.5-2 m pax, ALI 17)	China (6.5-7 m pax); Chinese Taipei <sup>32</sup> (5-5.5 m pax)
India	7.9	73	Malaysia (0.715-1 m pax, ALI 6), United Kingdom (1.5-2 m pax, ALI 10), Singapore (1-1.5 m pax, ALI 10), US (1.5-2 m pax, ALI 12)	United Arab Emirates (3-3.5 m pax); Saudi Arabia (1.5-2 m pax); Thailand (0.715-1 m pax)
Indonesia	12.9	25	Australia (0.715-1 m pax, ALI 6), Japan (0.715-1 m pax, ALI 10), Malaysia (2-2.5 m pax, ALI 14), Singapore (3-3.5 m pax, ALI 16)	-
Ireland	13.3	10	US (1.5-2 m pax, ALI 14)	-
Israel	11.9	32	US (1-1.5 m pax, ALI 25)	-
Italy	13	34	Switzerland (0.715-1 m pax, ALI 4), US (3-3.5 m pax, ALI 28)	-
Jamaica	24.7	19	US (2-2.5 m pax, ALI 28)	-
Japan	14.8	51	Australia (1-1.5 m pax, ALI 8), France (0.715-1 m pax, ALI 15), Hong Kong, China (2.5-3 m pax, ALI 18), Germany (0.715-1 m pax, ALI 10), Indonesia (0.715-1 m pax, ALI 10), Philippines (1-1.5 m pax, ALI 14), Republic of Korea (6.5-7 m pax, ALI 14), Singapore (1-1.5 m pax, ALI 14), Thailand (2-2.5 m pax, ALI 15), United Kingdom (0.715-1 m pax, ALI 14), US (11-11.5 m pax, ALI 18)	China (6-6.5 m pax); Chinese Taipei (2.5-3 m pax)
Malaysia	10.7	39	Australia (0.715-1 m pax, ALI 6), China (1-1.5 m pax, ALI 0), Hong Kong, China (0.715-1 m pax, ALI 12), India (0.715-1 m pax, ALI 6), Indonesia (2-2.5 m pax, ALI 14), Singapore (1.5-2 m pax, ALI 14), Thailand (1-1.5 m pax, ALI 11)	-
Mexico	14.6	32	Canada (0.715-1 m pax, ALI 4), US (15.5-16 m pax, ALI 17)	-
Morocco	10.5	51	France (2-2.5 m pax, ALI 11)	-
Netherlands	14.8	83	US (2.5-3 m pax, ALI 25)	-
Netherlands Antilles	34	1	US (0.715-1 m pax, ALI 34)	-
New Zealand	13.4	34	Australia (3.5-4 m pax, ALI 10)	-
Norway	9.4	53	Germany (0.715-1 m pax, ALI 7), United Kingdom (1.5-2 m pax, ALI 4)	Denmark (1-1.5 m pax); Sweden (0.715-1 m pax)
Pakistan	9.6	53	United Kingdom (0.715-1 m pax, ALI 14)	United Arab Emirates (1.5-2 m pax); Saudi Arabia (1-1.5 m pax)
Peru	22.7	15	US (0.715-1 m pax, ALI 34)	-
Philippines	13.1	38	Hong Kong, China (1-1.5 m pax, ALI 12), Japan (1-1.5 m pax, ALI 14), Republic of Korea (1-1.5 m pax, ALI 7), US (1-1.5 m pax, ALI 29)	-

<sup>32</sup> Chinese Taipei does not appear in WASA since it is not an ICAO Contracting State.

PARTY A	WALI	NUMBER OF ASAS	WASA AGREEMENTS	TRAFFIC RELATIONS NOT APPEARING IN WASA
			PARTY B (TRAFFIC RANGE, ALI)	PARTY B (TRAFFIC RANGE)
Republic of Korea	11.7	45	China (5.5-6 m pax, ALI 4), Hong Kong, China (1-1.5 m pax, ALI 12), Japan (6.5-7 m pax, ALI 14), Philippines (1-1.5 m pax, ALI 7), Thailand (1-1.5 m pax, ALI 6), US (3-3.5 m pax, ALI 28)	Chinese Taipei (1-1.5 m pax)
Russian Federation	4.2	94	France (0.715-1 m pax, ALI 0), Germany (2-2.5 m pax, ALI 1)	Ukraine (0715-1 m pax)
Saudi Arabia	9.3	19	United Arab Emirates (0.715-1 m pax, ALI 10)	India (1.5-2 m pax); Egypt (1.5-2 m pax); Pakistan (1-1.5 m pax)
Singapore	13	68	Australia (1.5-2 m pax, ALI 6), China (2-2.5 m pax, ALI 11), Hong Kong, China (1.5-2 m pax, ALI 12), India (1-1.5 m pax, ALI 10), Indonesia (3-3.5 m pax, ALI 16), Japan (1-1.5 m pax, ALI 14), Malaysia (1.5-2 m pax, ALI 14), Thailand (2.5-3 m pax, ALI 10)	-
South Africa	9.9	52	United Kingdom (1-1.5 m pax, ALI 14)	-
Spain	8.3	61	Argentina (0.715-1 m pax, ALI 11), Switzerland (1.5-2 m pax, ALI 5), US (1.5-2 m pax, ALI 18)	-
Sweden	9	52	US (0.715-1 m pax, ALI 7)	Norway (0.715-1 m pax)
Switzerland	9.8	103	Austria (0.715-1 m pax, ALI 14), France (1-1.5 m pax, ALI 7), Germany (2.5-3 m pax, ALI 6), Italy (0.715-1 m pax, ALI 4), Spain (1.5-2 m pax, ALI 5), United Kingdom (3.5-4 m pax, ALI 14), US (1-1.5 m pax, ALI 28)	-
Thailand	9.9	50	Australia (0.715-1 m pax, ALI 10), China (1.5-2 m pax, ALI 0), Germany (0.715-1 m pax, ALI 10), Hong Kong, China (2.5-3 m pax, ALI 12), Japan (2-2.5 m pax, ALI 15), Malaysia (1-1.5 m pax, ALI 11), Republic of Korea (1-1.5 m pax, ALI 6), Singapore (2.5-3 m pax, ALI 10), United Kingdom (1-1.5 m pax, ALI 10)	Chinese Taipei (1-1.5 m pax); India (0.715-1 m pax)
Tunisia	9.9	36	France (1-1.5 m pax, ALI 13)	-
Turkey	11.5	46	Germany (3.5-4 m pax, ALI 12), United Kingdom (0.715-1 m pax, ALI 11)	-
United Arab Emirates	11.3	20	Saudi Arabia (0.715-1 m pax, ALI 10), United Kingdom (1.5-2 m pax, ALI 14)	India (3-3.5 m pax); Iran (1-1.5 m pax); Pakistan (1.5-2 m pax); Bahrain (0.715-1 m pax); Egypt (0.715-1 m pax)
United Kingdom	12	90	Australia (1-1.5 m pax, ALI 14), Canada (2-2.5 m pax, ALI 12), Hong Kong, China (1-1.5 m pax, ALI 16), India (1.5-2 m pax, ALI 10), Japan (0.715-1 m pax, ALI 14), Norway (1.5-2 m pax, ALI 4), Pakistan (0.715-1 m pax, ALI 14), South Africa (1-1.5 m pax, ALI 14), Switzerland (3.5-4 m pax, ALI 14), Thailand (1-1.5 m pax, ALI 10), Turkey (0.715-1 m pax, ALI 11), United Arab Emirates (1.5-2 m pax, ALI 14), US (14.5-15 m pax, ALI 13)	-

PARTY A	WALI	NUMBER OF ASAS	WASA AGREEMENTS	TRAFFIC RELATIONS NOT APPEARING IN WASA
			PARTY B (TRAFFIC RANGE, ALI)	PARTY B (TRAFFIC RANGE)
United States	22.6	98	Argentina (0.715-1 m pax, ALI 5), Aruba (0,5-1 m pax ALI 34), <b>Australia (1,5-2 m pax, ALI 8)</b> , Belgium (0.715-1 m pax, ALI 25), <b>Bolivarian Republic of Venezuela (1-1.5 m pax, ALI 10)</b> , <b>Brazil (2-2.5 m pax, ALI 15)</b> , <b>Canada (18-18.5 m pax, ALI 27)</b> , <b>China (2-2.5 m pax, ALI 14)</b> , <b>Colombia (1-1.5 m pax, ALI 15)</b> , <b>Costa Rica (1.5-2 m pax, ALI 28)</b> , Denmark (0.715-1 m pax, ALI 28), <b>Dominican Republic (3-3.5 m pax, ALI 34)</b> , Ecuador (0.715-1 m pax, ALI 15), <b>El Salvador (1-1.5 m pax, ALI 34)</b> , <b>Germany (7-7.5 m pax, ALI 42)</b> , Guatemala (0.715-1 m pax, ALI 34), <b>Hong Kong, China (1.5-2 m pax, ALI 17)</b> , <b>India (1.5-2 m pax, ALI 12)</b> , <b>Ireland (1.5-2 m pax, ALI 14)</b> , <b>Israel (1-1.5 m pax, ALI 25)</b> , <b>Jamaica (2-2.5 m pax, ALI 28)</b> , <b>Japan (11-11.5 m pax, ALI 18)</b> , <b>Italy (3-3.5 m pax, ALI 28)</b> , <b>Mexico (15.5-16 m pax, ALI 17)</b> , <b>Netherlands (2.5-3 m pax, ALI 25)</b> , Netherlands Antilles (0.715-1 m pax, ALI 34), Peru (0.715-1 m pax, ALI 34), <b>Philippines (1-1.5 m pax, ALI 29)</b> , <b>Republic of Korea (3-3.5 m pax, ALI 28)</b> , <b>Spain (1.5-2 m pax, ALI 18)</b> , Sweden (0.715-1 m pax, ALI 7), <b>Switzerland (1-1.5 m pax, ALI 28)</b> , <b>United Kingdom (14.5-15 m pax, ALI 13)</b>	<b>France (4.5-5 m pax)</b> , <b>Bahamas (3.5-4 m pax)</b> , <b>Chinese Taipei (2-2.5 m pax)</b>

Notes: Parties to the top-67 agreements (i.e. those over 1 million passengers) are indicated in bold.  
"m pax" stands for "million passengers".

Source: Computed by the WTO Secretariat on the basis of ICAO regulatory data and IATA traffic data.

(b) Comments

46. While corresponding to a large extent to trade patterns, these results seem to contradict traditional perceptions in the sector. It is generally deemed impossible to harmonize the bilateral ASA regime because bilateral agreements are so numerous and diverse. ICAO has recorded over 2200 bilaterals, and the total number of existing bilaterals is estimated to be over 3000, if not even 4000.

47. However, this perception is clearly unfounded in terms of volume of traffic covered. The QUASAR figures suggest that, in order to liberalize nearly two-thirds of world traffic, only 100 agreements involving 50 parties would need to be changed.<sup>33</sup>

48. The top-100 agreements in terms of traffic all are all above the threshold of 715,000 passengers and, as Table B1 shows, the coverage of high-traffic bilateral relations in the WASA is particularly good. The WASA database covers 89 per cent of the traffic of bilateral relations over 715,000 passengers, compared with an estimated coverage for all bilateral ASAs of 70 per cent.<sup>34</sup>

## 2. Impact of plurilateral agreements

(a) Findings

49. The WTO Secretariat has computed the traffic covered by plurilateral agreements, whether in existence or in the process of signature or ratification, as identified in ICAO's "Regulatory and Industry Overview"<sup>35</sup> on the basis of IATA traffic statistics. It has added up the traffic for all bilateral relations involved (e.g. for the Yamoussoukro II Agreement, 50x49 = 2450 traffic relations) and related it to total scheduled international traffic (496 million passengers), rather than to WASA traffic (348 million), since at present WASA does not record any plurilateral agreement.

50. As Table B2 illustrates, the traffic covered by plurilateral agreements is relatively high, accounting for 23.3 per cent of international traffic.

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<sup>33</sup> These figures do not take into account any increases in traffic that would result from the opening-up of those 100 agreements.

<sup>34</sup> These figures exclude traffic with Chinese Taipei (15.9 million passengers), which is not an ICAO Contracting State.

<sup>35</sup> See *op. cit.*

**Table B2**  
**Share of total international scheduled traffic covered by plurilateral agreements, 2005**

<b>Plurilateral agreements</b>	<b>Total traffic covered by the plurilateral (pax)</b>	<b>Share of plurilateral in total international traffic</b>
Andean Pact	1,068,223	0.2%
CARICOM-MASA	1,999,281	0.4%
Fortaleza	5,200,960	1.0%
Banjul	446,285	0.1%
CLMV	718,696	0.1%
ACAC	12,798,832	2.6%
CEMAC	423,328	0.1%
COMESA	1,693,025	0.3%
Yamoussoukro II	9,255,464	1.9%
IMT	4,132,715	0.8%
BIMP/EAGA	2,911,980	0.6%
MALIAT	2,489,974	0.5%
BST	3,076,749	0.6%
<i>WAEMU</i>	<i>1,131,880</i>	<i>0.2%</i>
<i>PIASA</i>	<i>239,578</i>	<i>0.1%</i>
<i>ACS</i>	<i>5,847,233</i>	<i>1.2%</i>
<i>ASEAN Roadmap</i>	<i>17,469,507</i>	<i>3.5%</i>
<i>US-EC</i>	<i>26,880,170</i>	<i>5.4%</i>
<i>EU-Morocco</i>	<i>4,100,435</i>	<i>0.8%</i>
<i>ECAA</i>	<i>13,681,311</i>	<i>2.8%</i>
<b>Total</b>	<b>115,565,626</b>	<b>23.3%</b>

Note: Agreements that are still in the signature/ratification process are indicated in italics.

Source: Computed by the WTO Secretariat on the basis of ICAO regulatory data and IATA statistical data.

(b) Comments

51. The high share of traffic covered by plurilateral agreements needs to be interpreted with caution. There are at least two caveats.

52. First, more than half of the traffic covered, i.e. 12.8 per cent, comes from agreements in the process of signature or ratification (*WAEMU*, *PIASA*, *ASEAN Roadmap*, *US-EU Air Transport Agreement*, *EU-Morocco*, *ECAA*) on the fate of which it is difficult to speculate. The *US-EU Air Transport Agreement* counts, in that respect, for 5.42 per cent of the traffic.

53. Second, even for those plurilateral agreements that have entered into force, the degree of effective implementation varies considerably, according to both operators and the parties concerned. The extensive literature of the Economic Community of Africa (ECA) about the difficulties generated by the non-application of the *Yamoussoukro II* declaration is a case in point.<sup>36</sup> Another example is a statement by the former Deputy Director of the Air Transport Bureau of ICAO, Chris Lyle who, in a recently published article, writes "The [agreements] related to the European Union are substantive in effect, as are the *CLMV*, *MALIAT* and the three current intra-ASEAN agreements (*BST*, *IMT* and

<sup>36</sup> See [www.uneca.org/itca/Yamoussoukro](http://www.uneca.org/itca/Yamoussoukro)

BIMP/EAGA). However, the others are each only partly functional. One reason for this is that there is no strong underlying economic authority for the regions concerned."<sup>37</sup>

54. Against this background, the fact that most of these twenty plurilateral agreements have semi-liberal and liberal features akin to "classical open skies" and type G agreements needs to be seriously qualified.

### 3. Degree of openness of high-traffic agreements

(a) Findings

55. Table B3 contains the WALIs for the high-traffic bilateral ASAs, as well as for all the ASAs considered in the QUASAR.

**Table B3**  
**Weighted Air Liberalisation Index of high-traffic bilateral Air Services Agreements**

ASAs concerned	WALI
Top-67 ASAs	16.6
Top-100 ASAs	16.1
Top-200 ASAs	15.4
All QUASAR ASAs (1970)	14.0

Source: Computed by the WTO Secretariat.

56. The WALI of the first 200 agreements by volume is of 15.4, compared with the only slightly lower WALI of 14.0 for the totality of the QUASAR ASAs (i.e. 1970). This figure needs to be contrasted with an ALI of zero for "traditional" ASAs<sup>38</sup>, an ALI of 30 for "classical open skies" agreements<sup>39</sup>, and an ALI of 50 for "more than open skies" agreements.<sup>40</sup>

(b) Comments

57. These results might appear somewhat surprising at first glance. Given that the parties to "classical open skies" and "more than open skies" bilateral and plurilateral agreements include the largest aviation markets (e.g. US, EC, Singapore, Australia, New Zealand) one might have expected the high-traffic ASAs to be substantially more open, in terms of their WALIs, than smaller-traffic ASAs. This is the picture described, for instance, in ICAO's "Regulatory and Industry Overview".<sup>41</sup>

58. However, a closer analysis provides at least two sets of explanations for the above results. First, the outcome is affected by the absence of intra-EC traffic. If intra-EC ASAs had been included, they would have obtained an ALI of 50, which would have had to be weighted by the 192 million passenger intra-EC traffic (to be compared with a current WASA traffic of 348 million, or a rectified

<sup>37</sup> Airlines Business, November 2006. This article contains also some general considerations about the GATS and air transport services.

<sup>38</sup> Those including third and fourth freedom traffic rights, predetermination of capacity, dual approval of tariffs, substantial ownership and effective control, single designation, exchange of statistics and no provision for cooperative arrangements.

<sup>39</sup> Those including third, fourth and fifth freedom traffic rights, free determination of capacity, free pricing, substantial ownership and effective control, multi-designation, no exchange of statistics and provision for cooperative arrangements.

<sup>40</sup> Those including third, fourth, fifth, seventh freedom and cabotage traffic rights, free determination of capacity, free pricing, principal place of business, multi-designation, no exchange of statistics and provision for cooperative arrangements.

<sup>41</sup> See *op. cit.*, paragraphs 2.2 and 2.3.

one of 348+192=540 million). The exclusion of intra-EC traffic lowers the WALI of the largest ASAs considerably.

59. Second, a large part of the biggest traffic relations are either not, or not yet fully, governed by liberal provisions. In case they are, the relevant provisions are not necessarily amended or recorded as such in WASA. Hence, they are not analysed in the QUASAR. The following examples illustrate this point:

- Not governed by fully liberal provisions
  - US-Japan: fourth largest WASA agreement in terms of traffic, between 11 and 12 million passengers, ALI 11;
  - Japan-Republic of Korea: sixth largest WASA agreement in terms of traffic, between 6.5 and 7 million passengers, ALI 14;
  - China-Republic of Korea: seventh largest WASA agreement in terms of traffic, between 5.5 and 6 million passengers, ALI 4;
  - Turkey-Germany: eighth largest WASA agreement in terms of traffic, between 3.5 and 4 million passengers, ALI 12;
  - US-China: twenty-fourth largest WASA agreement in terms of traffic, between 2 and 2.5 million passengers, ALI 14.
  
- Not yet governed by liberal provisions
  - Agreements between the US and individual EC Member States which are not "classical open skies" agreements (e.g. US-United Kingdom: third largest WASA agreement in terms of traffic, between 14 and 15 million passengers, ALI 13) pending the ratification by both parties of the US-EU Air Transport Agreement, which would bring the US-EC ALI from 22 to 32 for the 18 EC Members States that have registered an agreement with the US with ICAO.
  
- Governed by liberal provisions, but not yet amended as such in WASA
  - US-Mexico: second largest WASA agreement in terms of traffic, between 15 and 16 million passengers, WASA ALI 17, actual ALI unknown;
  - Australia-New Zealand: ninth largest WASA agreement in terms of traffic, between 3.5 and 4 million passengers, ALI 10. With the Trans-Tasman Single Aviation Market (see compilation, page 197, paragraph 47), this ALI should be in the order of 50;
  - Switzerland-United Kingdom: tenth largest WASA agreement in terms of traffic, between 3.5 and 4 million passengers, ALI 14, but in fact covered by the EC-Switzerland agreement, which is a common market and therefore would rank in the vicinity of 50;
  - Switzerland-Germany: sixteenth largest WASA Agreement in terms of traffic, between 2.5 and 3 million passengers, ALI 6 (same considerations apply as for Switzerland-United Kingdom).
  
- Governed by liberal provisions but not recorded at all in WASA
  - US-France: between 4.5 and 5 million passengers (a "classical open skies" agreement);
  - Denmark-Norway: between 1 and 1.5 million passengers. Covered by the European Economic Area (EEA), which is a common market, and whose ALI would amount to about 50.

60. While these examples underline the incompleteness of the WASA sample, one should also note that ICAO has added to its 2005 edition of WASA, *proprio motu*, without registration by the parties concerned, the largest bilateral agreement in volume terms, i.e. US-Canada (between 18 and 18.5 million passenger), whose elements give it an ALI of 27.

#### 4. Restrictive market access features prevalent in bilateral agreements

##### (a) Findings

61. The following restrictive market access features are commonly contained in bilateral ASAs:

- Dual approval of tariffs are found in 85 per cent of agreements, covering 73 per cent of the traffic.
- Substantial ownership and effective control (SOEC) clauses are found in 90 per cent of agreements, covering 90 per cent of the traffic. By comparison, principal place of business provisions are found in 6 per cent of agreements, covering 8 per cent of the traffic, while community of interest clauses are found in less than 1 per cent of agreements, covering 0.1 per cent of the traffic.<sup>42</sup>
- Exchange of statistics, a key control instrument for governments, is still included in 77 per cent of agreements, covering 63 per cent of the traffic.
- Only 6 per cent of the agreements, covering 26 per cent of the traffic, contain a clause explicitly allowing cooperative arrangements among airlines.

##### (b) Comments

62. Current practice may be more liberal than what these figures seem to imply.

63. With regard to dual approval of tariffs, Civil Aviation Directorates no longer seem to control tariffs in a systematic manner. Such control, which would require considerable resources, has become extremely difficult in practice, since, with the advent of yield management systems, not a single passenger on the same plane pays the same tariff. According to industry practitioners and government officials, control of tariffs is done *ex post* and only in case of complaints by competitors. It is relatively difficult to document these practices, however. The same could be said, *mutatis mutandis*, for the exchange of statistics but, again, this point is difficult to document.

64. As for substantial ownership and effective control, the relevant clause has remained dominant. Still, three qualifications are necessary.

65. First, as a result of the November 2002 European Court of Justice (ECJ) judgements<sup>43</sup>, any bilateral agreement by an EC Member State is illegal under EC law if it does not contain a withholding/ownership "Community clause" to cover the possibility of designating airlines of other EC Member States. The WASA database records 888 ASAs by EC Member States, accounting for 21 per cent of the WASA traffic (nearly 73 million passengers out of 348 million).

66. Following the ECJ decision, the EC Commission has been mandated to conclude aviation agreements on behalf of the Member States with a number of third-country partners, such as the US (the US-EU Air Transport Agreement, covering 28.6 million passengers and 5.4 per cent of total scheduled traffic<sup>44</sup>), Morocco (Euro-Mediterranean Agreement, covering 4.1 million passengers and

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<sup>42</sup> The WASA does not code withholding/ownership provisions for 3.05 per cent of agreements, representing 2.26 per cent of the traffic.

<sup>43</sup> European Court of Justice (2002), *Commission v. the United Kingdom, Denmark, Sweden, Finland, Belgium, Luxembourg, Austria, Germany*, cases C-466/98, C-467/98, C-468/98, C-469/98, C-471/98, C-472/98, C-475/98 and C-476/98.

<sup>44</sup> The comparison with WASA traffic is difficult because only 18 EC Members States out of 25 have, thus far, an ASA with the US which is recorded in the WASA database and significant portions of the US-EC

0.8 per cent of world traffic) and eight South-East-European partners (the ECAA<sup>45</sup>, covering 13.6 million passengers and 2.8 per cent of total scheduled traffic). The Commission has also been mandated to negotiate, on behalf of the Member States, "horizontal agreements", i.e. agreements aimed at modifying only the withholding/ownership clause in existing bilateral ASAs (as of July 2006, 342 such agreements have been concluded, involving 23 non-EC parties). Individual EC Member States have also started re-negotiating their own bilateral ASAs, with the aim of introducing a "Community clause" (as of July 2006, 84 agreements have been amended, involving 40 non-EC parties).<sup>46</sup>

67. The second factor that qualifies the pervasiveness of the substantial ownership and effective control clause is that variations in restrictiveness do not appear in the WASA coding. For instance, a SOEC clause can cover a 100 per cent national ownership requirement, a 75 per cent ownership requirement (e.g. US) or a 49 per cent ownership requirement (e.g. EC, waived for other EC Members States' investors, who can own 100 per cent of any EC airline).

68. The third qualification concerns the fact that substantial ownership requirements, but also the effective control prerequisite, are often waived in practice. Aerolíneas Argentinas, for instance, was never denied the right to fly although it had two successive Spanish majority owners. The same was true for Sabena when it was owned by Air France and then by Swissair, and the same is hoped for by the foreign owners of KLM (i.e. Air France)<sup>47</sup>, and of Swiss (i.e. Lufthansa) when the respective merger processes will be completed.

69. This situation is, however, legally uncertain, as there is no entitlement to a permanent waiver. A threat by the US Department of Transport (DOT) to refuse such a waiver dissuaded British Airways from taking over KLM (see compilation, page 221, footnote 4). In Latin America, Lan Peru and the companies owned by Brazil's Synergy Group have faced at various times similar difficulties. Nevertheless, Latin America, with at least five trans-nationally-owned airlines (i.e. TACA, LAN, the Synergy Group's carriers<sup>48</sup>, Aerolíneas and Gol) appear to certain observers<sup>49</sup> as a place where a "*lex mercatoria*"<sup>50</sup> with regard to the withholding/ownership clause is progressively emerging.

70. A more systematic follow-up of waivers and examples of "*lex mercatoria*" could be undertaken on the basis of flights effectively flown and the ownership structure of airlines as contained, for instance, in the annual ownership reports of Airline Business. All flights operated by the airlines recorded in the compilation (page 220, Table 1, second row, and Table A1, pages 230-233, listing airlines trans-nationally owned) would fall under this category, if the nationality of their owner has not changed since.

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traffic (e.g. France-US) escape the WASA reach. At any rate, the US-EU Air Transport Agreement would account for a higher share of traffic if the numerator were the WASA traffic rather than total traffic.

<sup>45</sup> Once fully implemented, the ECAA will integrate Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the FYROM, Romania, Serbia and Montenegro and the U.N. Mission in Kosovo into the EC's internal aviation market, which consists of the 25 EC Member States as well as Norway and Iceland (see also [http://ec.europa.eu/transport/air\\_portal/international/pillars/common\\_aviation\\_area/ecaa\\_en.htm](http://ec.europa.eu/transport/air_portal/international/pillars/common_aviation_area/ecaa_en.htm)).

<sup>46</sup> The complete list of extra-EC parties involved in horizontal agreements and in individual EC Member States' re-negotiations is contained in Annex B-II.

<sup>47</sup> Insofar as the term "foreign" can be applied to intra-EC ownership.

<sup>48</sup> In Latin America, these are: Avianca and its subsidiary SAM in Colombia, Ocean Air in Brazil, Wayraperú in Peru and VIP in Ecuador.

<sup>49</sup> Carlos Grau Tanner, IATA Director for Government and Industry Affairs. This is a personal opinion that does not engage IATA.

<sup>50</sup> The body of pragmatic rules and principles laid down by medieval merchants to regulate their dealings that replaced the various feudal laws and Roman law, which were not sufficiently responsive to the growing demands of commerce.

71. With regard to cooperative arrangements, the notion of "lex mercatoria" appears even more relevant. The specialized literature, and in particular Airline Business's annual reports on alliances and code-sharing, shows that the geographical scope of cooperative arrangements spans well beyond the 126 WASA agreements that contain a clause explicitly allowing them.

72. Individual decisions taken by the States concerned outside the framework of bilateral agreements may explain this situation, but these decisions are difficult to document. However, in view of the quasi-universality of the practice<sup>51</sup> and its inherent bilateral nature, it seems strange that cooperative agreements' clauses are not more systematically included within bilateral agreements.

## **5. Typology of bilateral agreements**

### **(a) Findings**

73. By combining the main market access features of the QUASAR coding system, 1536 different kinds of agreements are theoretically possible<sup>52</sup>, i.e. nearly as many as the number of agreements in WASA (i.e. 1970).

74. However, a detailed examination of bilateral agreements shows that just seven "types", combining features on freedoms, designation, withholding/ownership, tariffs and capacity, cover 1424 agreements and 72 per cent of the WASA traffic (and possibly more, since ICAO has not fully coded 15 per cent of its registered agreements due to incomplete notifications).

### **(b) Comments**

75. It is often said that one of the reasons that would prevent the establishment of a multilateral framework in aviation is the "infinite variety" of bilaterals. This commonly held perception is, however, invalidated by the figures above, which imply that the key market access provisions of the 1424 agreements concerned could theoretically be replaced by just seven sets of provisions.

76. It could still be argued that the diversity of ASAs is attributable to three other provisions, namely:

- Confidential memoranda, which are not available for analysis;
- Differences in route schedules. However, although difficult to examine (see Methodological notes in Part D), it is likely that a closer look at the routes granted and effectively flown would show very similar patterns for each ASA type (i.e. unlimited granting of city-pairs for type G, capital cities and two or three of the largest cities for the preceding types);
- Capacity. The level of capacity and number of frequencies allowed for each city-pair would seem to be the only remaining factor of diversity. Its relevance could be further explored, however, for instance by relating capacity levels granted to the total traffic of the two airports concerned (see also section B.4(f) in this regard).

## **6. Analysis by type**

### **(a) Findings**

77. As illustrated by section 3 above, an analysis based on WALLs is not very informative. The top-67 WASA agreements (i.e. those covering over 1 million passengers), as well as the top-100 and

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<sup>51</sup> Third country code-sharing arrangements are rarer, however, though increasingly frequent.

<sup>52</sup> In this regard, see the Methodological notes in Part D.

top-200 WASA agreements in terms of traffic show a relatively similar average WALI to that of the full WASA sample (see Table B3). This is because the high-traffic agreements have not proven to be necessarily more liberal than the lower-traffic ones.

78. ICAO has developed a rudimentary classification of ASAs based on whether they follow one of the three approaches – i.e. traditional, transitional and full liberalization – defined in its Template Air Services Agreements. However, the allocation of the over 2200 agreements contained in WASA among these three approaches – 1982 traditional, 154 transitional and 65 full liberalisation ASAs – does not allow for a particularly informative analysis either. The QUASAR types prove more useful in this regard.

79. Table B4 illustrates the situation for the seven QUASAR types in terms of number of ASAs, volume and percentage of traffic covered, as well as their average WALI.

**Table B4**  
**Analysis by Air Services Agreement type**

Type	Number of agreements	Traffic covered (million pax)	Percentage of WASA traffic	WALI
<b>A</b>	221	18.4	5.3%	0.3
<b>B</b>	182	19.7	5.6%	4.2
<b>C</b>	432	30.2	8.7%	6.2
<b>D</b>	99	10.4	3.0%	10.2
<b>E</b>	267	43.0	12.3%	10.3
<b>F</b>	154	71.1	20.4%	15.5
<b>G</b>	69	58.0	16.6%	30.4
<b>i</b>	302	56.0	16.0%	10.6
<b>o</b>	244	41.8	12.0%	14.3

Source: Computed by the WTO Secretariat

(b) Comments

80. An analysis by type traces a rather liberal picture.

- The most liberal type, type G<sup>53</sup> (comprising multi-designation; substantial ownership and effective control, principal place of business or community of interest; free pricing or dual disapproval of tariffs; fifth freedom traffic rights; and free determination of capacity), covers 3.5 per cent of the agreements (69), but 16.6 per cent of the traffic.
- The next type in terms of openness, type F (comprising multi-designation, substantial ownership and effective control, double approval, fifth freedom traffic rights and Bermuda I) covers 7.8 per cent of the agreements (154), but 20.4 per cent of the traffic.
- The above data suggest that, for more than one third of the WASA traffic, i.e. 129 million passengers, there are relatively few restrictions and very similar rules.

<sup>53</sup> Type G covers "classical open skies" and "more than open skies" agreements. It is the most liberal type identified, but not all of the features that define it are necessarily the most liberal ones (e.g. substantial ownership and effective control may still be present).

81. A tendency towards openness and common rules is also manifest in recent plurilateral agreements. If they were all ratified and fully implemented, plurilateral agreements would result in the application of liberal or semi-liberal provisions to 115 million passengers. Added to the 129 million passengers covered by type G and F bilateral agreements, they would nearly double the share of total scheduled traffic covered by liberal provisions.

## **7. QUASAR types and ICAO's Template Air Services Agreements**

### **(a) Findings**

82. ICAO devised the Template Air Services Agreements for the Fifth ICAO Worldwide Air Transport Conference. The TASAs are constructed as three sets of provisions following three possible approaches: traditional, transitional and full liberalization. ICAO has allocated the over 2200 ASAs contained in the WASA database to these three categories, in what could be termed a "top-down" approach.

83. The QUASAR types have instead been constructed in a "bottom-up" manner. The WTO Secretariat used the coding of the WASA database to assess the 1970 ASAs retained for its analysis. An examination of this coding revealed recurrent patterns that led to the identification of the seven types.

84. The various elements making up each type were found to have exact counterparts in the TASAs, but not necessarily within the same approach. For a given type, the corresponding provisions of the TASAs combined different approaches.

85. Table B5 illustrates the correspondence between the QUASAR types and the provisions of the TASAs. The text corresponding to the TASAs' provisions for each type is contained in Annex B-I.

**Table B5**  
**Correspondence between QUASAR types A to G and the ICAO Template Air Services Agreements provisions**

	<b>Freedoms</b>	<b>Designation</b>	<b>Withholding/Ownership</b>	<b>Tariffs</b>	<b>Capacity</b>
<b>TYPE A</b>	3 <sup>rd</sup> and 4 <sup>th</sup> only Art TD 2.2.c page A-9 + Annex I, Section 1, TD.A, page A-92	Single designation Art TD 3.1, page A-11	Substantive ownership and effective control Art TD 4 a, page A-16	Double approval Art TD 17.1-2, pages A-41-42	Pre-determination Art TD 16.1-5, pages A36-37
<b>TYPE B</b>	3 <sup>rd</sup> and 4 <sup>th</sup> only Art TD 2.2.c page A-9 + Annex 1, Section 1, TD.A, page A-92	Multi-designation Art TS 3.1, page A-12	Substantive ownership and effective control Art TD 4.a, page A-16	Double approval Art TD 17.1-2, pages A-41-42	Pre-determination Art TD 16.1-5, pages A-36-37
<b>TYPE C</b>	3 <sup>rd</sup> ,4 <sup>th</sup> ,5 <sup>th</sup> Art TS-FL 2.2.c & 3, page A-9 + Annex I, Section 1, TS option 1.A-B, page A-92	Single designation Art TD 3.1, page A-11	Substantive ownership and effective control Art TD 4.a, page A-16	Double approval Art TD 17.1-2, pages A-41-42	Pre-determination Art TD 16.1-5, pages A-36-37
<b>TYPE D</b>	3 <sup>rd</sup> ,4 <sup>th</sup> ,5 <sup>th</sup> Art TS-FL 2.2.c & 3, page A-9 + Annex I, Section 1, TS option 1.A-B, page A-92	Single designation Art TD 3.1, page A-11	Substantive ownership and effective control Art TD 4.a, page A-16	Double approval Art TD 17.1-2, pages A-41-42	Bermuda I Art TS 16.1-5, pages A-37-38
<b>TYPE E</b>	3 <sup>rd</sup> ,4 <sup>th</sup> ,5 <sup>th</sup> Art TS-FL 2.2.c & 3, page A-9 + Annex I, Section 1, TS option 1.A-B, page A-92	Multi-designation Art TS 3-1, page A-12	Substantive ownership and effective control Art TD 4.a, page A-16	Double approval Art TD 17.1-2, pages A-41-42	Pre-determination Art TD 16.1-5, pages A-36-37
<b>TYPE F</b>	3 <sup>rd</sup> ,4 <sup>th</sup> ,5 <sup>th</sup> Art TS-FL 2.2.c & 3, page A-9 + Annex I, Section 1, TS option 1.A-B, page A-92	Multi-designation Art TS 3-1, page A-12	Substantive ownership and effective control Art TD 4.a, page A-16	Double approval Art TD 17.1-2, pages A-41-42	Bermuda I Art TS 16.1-5, pages A-37-38
<b>TYPE G</b>	3 <sup>rd</sup> ,4 <sup>th</sup> ,5 <sup>th</sup> Art TS-FL 2.2.c & 3, page A-9 + Annex I, Section 1, TS option 1.A-B, page A-92	Multi-designation Art FL 3-1, page A-14	Substantive ownership and effective control Art TD 4.a, page A-16 <i>or</i> Principal Place of Business Art TS 4, option 2.a., page A-17 <i>or</i> Community of interest Regional or Plurilateral TASA (Attachment B), page B-11, TD 2.a	Free Pricing Art FL 17, page A-51 <i>or</i> Double Disapproval Art TS 17.1-17.2, option 1-2, pages A-49-50	Free Determination Art FL 16.2-4, pages A-39-40

Notes: TD: Traditional approach; TS: Transitional approach; FL: Full liberalization approach

Source: Compiled by the WTO Secretariat.

(b) Comments

86. The provisions of the TASAs are directly inspired by "real life" examples and by the various editions of the ICAO Manual of Regulation.<sup>54</sup> From a technical perspective, they could perfectly replace the corresponding market access features of the bilateral ASAs concerned.

B. REGIONAL ANALYSIS

87. At the outset, it should be noted that the regions used correspond to those normally identified in WTO publications. They are based on geographical criteria and, therefore, not homogeneous in terms of size, number of countries or territories (e.g. 3 in North America, 54 in Africa), level of development or volume of traffic. Hence the value of a percentage point identified in the charts and tables for Africa or the Middle East is much lower than in Asia and Oceania or North America. The only percentage data that are comparable among regions are those contained in the "all regions" profile.

88. The charts presented in the Appendix to Part B, "Global and Regional Profiles", follow, *mutatis mutandis*, the same structure as those contained in the profiles by Contracting State in Part C of the present document.

**1. Analysis by Air Liberalisation Index range**

89. The most prevalent range of ALI is the 10-14 range<sup>55</sup>, which covers 41 per cent of WASA traffic. It is the most common range, in terms of traffic, in five out of seven regions, i.e. Africa, Asia and Oceania, Europe, the Middle East and South and Central America and the Caribbean.

90. The 10-14 range comes only third in the Commonwealth of Independent States (CIS) region, where more restrictive index values prevail, and in North America, where more liberal ones are more common. In South and Central America and the Caribbean, the most liberal range, 26-50 is as common, in terms of traffic covered, as the 10-14 one, probably because of the numerous "classical open skies" agreements concluded with North America and the liberal policy of some Contracting States of the region (e.g. Costa Rica, with a WALI of 22).

91. The most liberal range, 26-50, accounts for 16 per cent of worldwide WASA traffic. To reach an ALI of more than 25, an ASA must contain most of the features of a "classical open skies" agreement or, at least, half of the characteristics of a "more than open skies" agreement. This level of ALI corresponds almost exclusively to type G agreements.<sup>56</sup> This means, in essence, that one passenger out of six travels under a "classical open skies" or "more than open skies" regime. The next most liberal range, 20-25, covers 2 per cent of worldwide WASA traffic.

92. The more liberal ranges, 26-50 and 20-25 are completely marginal in the CIS, Africa, the Middle East, and, perhaps more surprisingly, Asia and Oceania, where big volumes combine with low ALIs (see also Table B1). However, the effects of certain plurilateral agreements (BIMP/EAGA, BST, IMT, CLMV, ASEAN Road Map, MALIAT) or bilateral agreements (Australia-New Zealand Trans Tasman Single Aviation Market) in the Asia and Pacific region, whose ALIs are well above 25, are not taken into account by these WASA figures.<sup>57</sup>

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<sup>54</sup> The latest edition (i.e. the fourth one) is dated 2004.

<sup>55</sup> The features that make up these 10-14 points and their variations will be analysed in more details in a second document as well as the features determining other ranges.

<sup>56</sup> Type G agreements all rank between 24 and 50, with a WALI of 30.42; type F agreements all rank between 14 and 18, with a WALI of 15.54.

<sup>57</sup> A more detailed analysis of the WALIs and traffic impact of plurilateral agreements will be conducted in a second document.

93. The two most liberal traffic ranges also account for a surprisingly low proportion of traffic in Europe. However, it should be recalled that intra-EC traffic relations are excluded (ALI 50; traffic 194 million passengers) and that several plurilateral and bilateral agreements concluded by the EC (e.g. EC-Switzerland, or, pending ratification, the ECAA or US-EU Air Transport Agreement) as well as some existing high-traffic liberal agreement (e.g. US-France) are not taken into account. This qualification would need to be borne in mind more generally for all the results obtained for Europe.

94. In North America, the two most liberal ranges account for nearly half of the traffic. This is due, notably, to the liberal policies and high-traffic volumes of the US, but also of Canada. These are the only developed countries with WALIs higher than 20.<sup>58</sup> Mexico, which in line with WTO practices has been included in the North American region, contributes, to a certain extent, to these results. Its WALI of 14.6, though lower than that of Canada and the US, exceeds that of Contracting States with similar size, population and GDP per capita and of many developed countries.

95. The liberal policies and high traffic of North America have strong knock-on effects in South and Central America and the Caribbean, for which North America represents 53 per cent of the traffic and where a number of "classical open skies" agreements have been concluded with the US (e.g. US-Costa Rica, US-Dominican Republic, US-Guatemala, US-El Salvador, US-Jamaica). As for Europe, traffic with North America is largely liberalized, with the notable exception of the UK. Ratification of the US-EU Air Transport Agreement would provide an additional push.

96. The most restrictive ranges, 0-4 and 5-9, account for, respectively, 12 per cent and 14 per cent of worldwide WASA traffic. They are mostly found in the CIS region, where they represent 80 per cent of the traffic, but also in Africa and the Middle East.

## **2. Analysis by type of agreements**

97. Types are analysed in four groups: G and F (liberal and quasi-liberal), D and E (types with two liberal features, i.e. fifth freedom and Bermuda I for D, and fifth freedom and multi-designation for E), C and B (types with only one liberal feature, i.e. multi-designation for B and fifth freedom for C) and type A ("traditional" agreements scoring zero). Type "o", all other ASAs, may cover very different situations, from totally illiberal to liberal, and it is too heterogeneous to draw any general conclusions.<sup>59</sup>

98. The most liberal types, type G ("classical open skies" and "more than open skies") and F represent together 35 per cent of the traffic. They are prevalent in the two American regions, and their combined share is much lower in other regions.

99. Types which encompass two liberal features, i.e. D and E, account together for 15 per cent of worldwide WASA traffic. Type D is insignificant in every region except Asia and Oceania, where it accounts for 6 per cent of the traffic. Type E is the prevalent type in the Middle East and Africa (24 per cent), while it is marginal in the CIS and North America.

100. Types B and C, which encompass only one liberal feature, account together for 15 per cent of global traffic. They are most prevalent in the CIS, Africa and the Middle East, and of marginal importance in North America.

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<sup>58</sup> All other Contracting States having a WALI higher than 20 are developing countries, namely: Aruba, Netherlands Antilles, El Salvador, Honduras, Guatemala, Dominican Republic, Marshall Islands, Nicaragua, Grenada, Jamaica, Peru, Costa Rica and Nauru.

<sup>59</sup> Type "i" (incomplete WASA coding) which accounts for 16 percent of the traffic globally and is mostly present in the CIS, Europe and Africa has been discarded. This "incomplete coding" category has no equivalent in the ALI ranges, as any incomplete or un-coded features is given a "0" value by the QUASAR methodology, thereby lowering the ALI of the bilateral agreement concerned..

101. Type A, i.e. the "traditional" ASA, accounts globally for only 5 per cent of WASA traffic, and is particularly frequent in the Middle East, where it accounts for 11 per cent of the traffic.

### **3. Analysis by traffic destination**

102. Regional traffic patterns reflect a variety of factors, including size, geography, levels of economic activity. They must be interpreted with care. Also, it is important to bear in mind that traffic relations are not symmetrical when expressed in percentages: for example, the traffic between Europe and Africa constitutes 10 per cent of overall traffic to and from Europe, but only 61 per cent of traffic to and from Africa.

103. Intra-regional traffic ranks first in three regions, i.e. Asia and Oceania, where it accounts for 70 per cent of the traffic, North America, where it stands at 40 percent, and Europe, where it covers 35 per cent.<sup>60</sup> It ranks second in South and Central America and the Caribbean, with traffic with North America ranking first, Africa and the Middle East, where the largest share of the traffic is with Europe. In the CIS, instead, intra-regional traffic ranks third, with traffic with Europe and Asia and Oceania taking, respectively, the first and second places.

104. The importance of intra-regional traffic gives particular weight to regional plurilateral liberalization initiatives.

105. As for inter-regional traffic patterns, they correspond to a very large extent to goods and services trade flows, historical links and geographical proximity. There are very few, if any, surprise observations in that regard, as the following figures show.

106. For Africa, traffic to Europe comes first (61 per cent), followed distantly by traffic with Asia and Oceania, the Middle East, and North America. Traffic with South and Central America and the Caribbean and with the CIS is virtually inexistent.

107. For Asia and Oceania traffic with Europe and North America rank first at 13 per cent, with the bulk of the traffic being intra-regional. Other regions represent only marginal shares.

108. Traffic with Europe is by far the most important for the CIS, accounting for 66 per cent of total traffic, followed distantly by Asia and Oceania, with 14 per cent, North America and the Middle East. Traffic with Africa and South and Central America and the Caribbean is trivial.

109. For Europe, traffic is the least concentrated of all regions. Aside from intra-European traffic, which accounts for 35 per cent, inter-regionally North America comes first, at 25 per cent of total traffic, followed by Asia and Oceania at 15 per cent, Africa at 10 per cent, and the CIS, South and Central America and the Caribbean and the Middle East all standing at 5 per cent.

110. For Middle East, Europe comes first with 41 per cent of total traffic, followed by Asia and Oceania and North America. The other regions only account for more marginal traffic.

111. For North America, Europe also comes first, with 27 per cent of total traffic, followed by Asia and Oceania and South and Central America and the Caribbean. Traffic with all other regions is minor.

112. Finally, South and Central America and the Caribbean is the only region where Europe, with 30 per cent of total traffic, ranks second. For obvious reasons, it trails after North America, which accounts for 53 per cent of the traffic. The share for Asia and Oceania seems particularly low,

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<sup>60</sup> Intra-European traffic excludes intra-EC traffic.

notably in view of at least one trans-Pacific plurilateral air transport agreement, the MALIAT, and numerous trans-Pacific trade agreements.

#### **4. Analysis by features**

##### **(a) Fifth freedom traffic rights**

113. Fifth freedom traffic rights are granted in two-thirds of all agreements which, in turn, cover close to 80 per cent of global traffic. Of course, the share of fifth freedom traffic in total traffic is much lower, because not all rights are used and because third and fourth freedom traffic constitutes the bulk of the traffic. The identification of fifth freedom traffic flows has been impossible with the set of available data and, to the Secretariat's knowledge, it has never been attempted. Estimates might be possible in the context of a longer-term project requiring relatively costly data sets.<sup>61</sup>

114. Like multi-designation, fifth freedom rights are frequently associated with "classical open skies" agreements. Traffic coverage of almost 80 per cent implies, however, that fifth freedom is present in many more agreements than just types F and G. Somewhat paradoxically, this may cast doubts on the degree of openness implied. While frequently used to introduce third-party competition on a given route, fifth freedom would not be granted so widely if it had such radical effects.

115. Two technical elements may contribute to explaining these findings. First, WASA only codes the existence or absence of a clause granting fifth freedom rights, but does not indicate if these rights are unlimited or limited to some, or even just one city-pair. A proper assessment would necessitate a detailed analysis of the route schedules, a probably very revealing, but complex and time-consuming exercise (see Methodological notes in Part D).

116. Second, a closer look at the rights effectively exercised would probably show that fifth freedom is really needed only by a handful of Contracting States. Due to their geographic situation or insufficient hinterland, carriers may need to serve intermediary or beyond destinations to operate economically viable services. For other carriers, fifth freedom rights may be of marginal importance, and be used only to generate additional revenue while aircraft are repositioned. In most instances, carriers prefer to serve beyond markets either directly, if it makes commercial sense, or otherwise via code-shares and alliances.

117. At regional level, variations appear relatively limited, save for the CIS, where fifth freedom rights are granted in ASAs accounting only for 29 per cent of the traffic. In all other instances, the granting of fifth freedom concerns two-thirds or more of the traffic covered by the agreements concerned.

##### **(b) Seventh freedom traffic rights**

118. Seventh freedom rights remain, as expected, a marginal feature. They are granted only in 39 agreements (2 per cent of all QUASAR agreements), covering about 6 per cent of the WASA traffic. However, this feature is present in all regions, even if only marginally in the CIS, Africa, Asia and Oceania, and the Middle East.

119. It should be borne in mind, however, that the WASA coding does not distinguish between seventh freedom rights for cargo, a more common feature, and seventh freedom rights for passengers,

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<sup>61</sup> The IATA and OAG data sets could provide the starting point for the estimation of fifth freedom traffic. IATA and OAG data would allow to distinguish, within direct services (e.g. services operated under the same flight number), between non-stop flights (i.e. third and fourth freedom flights) and other flights where a third city is served (i.e., either flights entailing consecutive cabotage – a very rare feature – or flights with a fifth freedom component).

a very uncommon feature. Furthermore, it has not been possible to identify seventh freedom traffic flows with the set of data available to the Secretariat. They might, however, be estimated in the context of a longer-term project, using the same costly data sets as for fifth freedom traffic.

(c) Cabotage traffic rights

120. The granting of cabotage is an extremely rare feature in WASA. It appears in only two agreements, i.e. China-Albania and New Zealand-Brunei Darussalam, which cover very little traffic.

121. Cabotage traffic has not been identified as such by the Secretariat. In view of the low number of agreements involved, given the appropriate data sets it might be possible to identify whether such rights are used, and it might even be feasible to estimate the traffic. Further analysis could include at least one additional agreement not recorded in WASA, which covers significant traffic (i.e. Australia-New Zealand, with between 3.5 and 4 million passengers). Moreover, several plurilateral agreements covering several million passengers contain cabotage rights implicitly or explicitly (e.g. EEA, ECAA).

(d) Designation

122. The results obtained for multi-designation clauses are comparable to those for fifth freedom traffic rights. While traditionally considered as a liberal and modern feature, associated with "classical open skies" agreements, multi-designation is in fact not confined to these kinds of ASAs. Globally, this feature appears in 1063 agreements (54 per cent of QUASAR agreements), covering close to 80 per cent of WASA traffic. However, in most instances, Contracting States have only one international scheduled airline and would therefore not actually need multi-designation, even if this situation is progressively changing with the multiplication of low-cost carriers operating international services, notably in Asia.

123. Aside from the CIS, where it accounts for 42 per cent of the traffic, in all other regions multi-designation covers more than two-thirds of the traffic. It accounts for nearly 95 per cent in North America.

124. WASA coding does not distinguish between double and multiple designation. Identifying instances where designation is limited to two airlines might be possible, but it would require using ICAO's Database of Aeronautical Agreements and Arrangements (DAGMAR) to access the text of the agreements.<sup>62</sup> Nevertheless, the fact that, in numerous instances, designation may be limited to two airlines is not necessarily a restrictive feature, provided that the parties involved do not have more than two international airlines each.

125. It might be interesting to analyse changes in the number of airlines by Contracting State over time, taking into account the type of traffic carried (national, international, scheduled, non-scheduled) and fluctuations in the participation of low-cost carriers, to see whether the need for multi-designation has increased and whether the agreements have followed suit.

(e) Withholding/ownership

126. The substantial ownership and effective control criterion (SOEC) remains overly dominant, representing about 90 per cent of total traffic, and exhibits very little regional variation.<sup>63</sup> The

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<sup>62</sup> Out of the 2204 WASA agreements, only 1837 are recorded in DAGMAR and the Secretariat would need to obtain the text of the remaining agreements. ICAO's DAGMAR is available from: [http://www.icao.int/applications/dagmar/main.cfm?UserLang=\\_e](http://www.icao.int/applications/dagmar/main.cfm?UserLang=_e)

<sup>63</sup> SOEC accounts for 91 per cent of traffic in Europe. An important qualification results from the November 2002 European Court of Justice rulings, which make the community of interest criteria compulsory for all agreements involving EC Member States

pervasiveness of the SOEC criterion, however, needs to be qualified in at least two respects. First, as discussed earlier (see section 4 of the Global Analysis), the WASA only codes the nature of the withholding/ownership provision, not its actual content, which may be more or less restrictive. Second, waivers to this requirement are widespread. Hence, a statistical follow-up of waivers granted would also show that reality is more complex and more liberal, though less stable, than these figures might suggest.

127. The principal place of business criterion accounts for less than 8 per cent of overall traffic. It is found predominantly in Asia and Oceania, in agreements covering 14.5 per cent of the regional traffic, in North America (5.6 per cent) and in Europe (5.2 per cent). In other regions, this criterion is virtually inexistent.

128. The community of interest criterion accounts for about 2 per cent of the traffic in the CIS region and is insignificant in all other regions.

129. Finally, WASA contains an "undetermined" category which accounts for 2 per cent of global traffic, but 18 per cent in the CIS region.

(f) Capacity

130. Predetermination is the dominant capacity feature, accounting for about 44 per cent of world traffic. However, it represents over 90 per cent of the traffic in the CIS, and only about 10 per cent in North America.

131. Anecdotal evidence<sup>64</sup> suggests that predetermination of capacity is a restrictive market access feature, even if the actual effects may vary widely in practice. A predetermination clause limiting capacity to a level well above the commercial potential of a city-pair is in practice equivalent to a free determination clause.

132. Details of capacity clauses are often contained in confidential memoranda that are not notified to ICAO. Even if available, e.g. through the ICAO DAGMAR application, it would be difficult to assess whether these actually restrain traffic as long as the route schedules are not taken into account.

133. Two sets of benchmarks could be used, nevertheless, to judge the degree of openness of capacity and routes. The first is of commercial nature: Are the individual city-pairs covered by the route schedule of commercial interest? Are commercially attractive city-pairs missing from the schedule? Do the capacity clauses (frequencies, number of seats, change of gauge) offered by the agreement exhaust the commercial potential of the city-pairs covered? Information about the commercial potential of city-pairs is highly valuable and IATA, for instance, organizes regular meetings ("routes") on this subject. In practice, this information is concentrated with the two airlines of the two countries served plus the major "global airlines" and fifth and sixth freedoms carriers, CRS vendors (when providing MIDT services), some very specialized consulting firms (Air Transport Intelligence (ATI), the Centre for Asia Pacific Aviation (CAPA), OAG) and the planning sections of aircraft manufacturers. However, the different view taken by Boeing and Airbus with regard to the intensification of the hub-and-spoke model (possibly best served by A380s) versus the multiplication of city-pair links (possibly best served by the Boeing 787s) is an example of the uncertainties surrounding such information. The same goes for the capacity granted on a given city-pair, e.g. only a handful of experts would know if two flights a week between Paris and Chengdu are restrictive or not.

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<sup>64</sup> According to air negotiators, capacity and route features are key because agreements tend to be very similar (virtually all of them include substantial ownership and effective control and dual approval of tariffs, which is never applied in practice except on denunciation) and because what airlines are predominantly interested in, when briefing their national governments, is the commercial potential of city-pairs.

134. The second type of benchmark consists of a comparison of the patterns of capacity and routes granted by a country to its partners within a given ASA type. This comparison could take the form of a matrix of routes, as exemplified by Table B6. For each route, the level of capacity granted could be assessed via an index. Such an index would take into account a number of different elements, including:

- total international traffic of the two airports concerned;
- the relative size of these two airports, as the volume of traffic between a given city-pair is largely determined by the smallest of the two airports concerned (e.g. Brussels-Beijing versus London-Beijing);
- the level of development of the parties concerned, insofar as it influences the volume and nature of the traffic (scheduled versus non-scheduled, business versus economy class), through indicators such as GDP per capita or the share of air passenger travel in total trade;
- the distance between the two airports;
- the capacity granted for the city-pair;<sup>65</sup> and, possibly
- the load factor.

**Table B6**  
**Template for the comparison of routes and capacity granted**

Party A	Bilateral partners for type F ASAs: parties B, C, D and E				
	1 <sup>st</sup> largest city	2 <sup>nd</sup> largest city	3 <sup>rd</sup> largest city	4 <sup>th</sup> largest city	5 <sup>th</sup> largest city
1 <sup>st</sup> largest city	B,C,D	C,D			
2 <sup>nd</sup> largest city	B,F				
3 <sup>rd</sup> largest city					
4 <sup>th</sup> largest city					
5 <sup>th</sup> largest city					

Source : WTO Secretariat

135. Such comparisons are subject to caveats. For example, there are obvious reasons why the capacity clause of an agreement, say between Mali and China on capital cities (Bamako-Beijing), is lower than the capacity clause between Beijing and London. Still, it would allow for useful inferences when the cities concerned are located at similar distances, have similar levels of development and similar traffic volumes (e.g. Beijing on the one hand, Paris, Frankfurt and London on the other).

136. The second most frequent capacity clause is Bermuda I, which accounts for 26 percent of world traffic, with limited regional variation. The only exception is the CIS region, where, in light of the pervasiveness of predetermination, Bermuda I is only found in ASAs covering less than 4 per cent of the traffic.

137. Bermuda I is a semi-liberal criterion where the control of capacity takes place *ex post*. The actual degree of restrictiveness depends on the parties' approach to monitoring. Since it is generally difficult to backtrack on a liberal capacity policy, this criterion has been valued as semi-liberal in the QUASAR. Similarly, the absence of a requirement to exchange statistics, which is combined with Bermuda I in 70 cases out of 341, is another clue to the relative openness of this capacity clause.<sup>66</sup>

<sup>65</sup> These data would be available from OAG.

<sup>66</sup> A possible refinement of the QUASAR methodology could consist of giving additional weight to the combination of certain features, such as Bermuda I and absence of exchange of statistics.

138. The most liberal capacity criterion, free determination, accounts for 18 per cent of global traffic, but covers as much as 46 per cent of the traffic in North America. It is of marginal importance in Africa and the CIS.

139. Finally, WASA contains an "undetermined" category for capacity whose weight is significant, accounting for 12 per cent of total traffic, and nearly twice as much in Europe.

(g) Tariffs

140. Free determination, the most liberal tariff clause, is of marginal importance. It is found in only one region, i.e. Asia and Oceania, in ASAs covering 310,000 passengers, i.e. 0.25 per cent of regional traffic.<sup>67</sup> Two other semi-liberal features, i.e. zone pricing and country of origin, are of little significance as well.

141. The dominant tariff clause is dual approval, which accounts for 73 per cent of total traffic, over 90 per cent of traffic in Asia and Oceania and around 50 per cent in Latin America, the Caribbean and North America. In both regions several "classical open skies" agreements are in force.

142. A semi-liberal clause, i.e. dual disapproval, ranks a distant second. It accounts for 20 per cent of world traffic, but for as much as 45 per cent of traffic in North America and just below 7 per cent in Asia and Oceania. Finally, WASA has an "undetermined" category for tariffs which covers about 4 per cent of world traffic.

143. As discussed in section 4 of Global Analysis, these results are somewhat surprising in view of yield management practices, whereby the price for the same seat varies significantly depending on time of purchase and the load factor of the plane. Such practices imply a degree of tariff flexibility which appears difficult to reconcile with a completely *a priori*-administered pricing system. However, apart from rare cases making the headlines (e.g. the Italian authorities checking British Airways tariffs in 2004), tariff practices are not documented and problems, if any, tend to be solved discreetly through bilateral consultations.

(h) Cooperative arrangements

144. Clauses allowing for cooperative arrangements are found in ASAs accounting for only one-quarter of world traffic. While covering over 70 per cent of the traffic in North America, they are of little importance in Africa and the CIS. As explained in section 4 of the Global Analysis, these arrangements are more widespread in practice than these shares might suggest.

(i) Exchange of statistics

145. The absence of compulsory exchanges of statistics among governments is indicative of the intention not to monitor closely the evolution of capacity and prices.

146. There are three regions where the exchange of statistics is relatively unimportant, i.e. South and Central America and the Caribbean, North America, and the CIS. Agreements requiring the exchange of statistics account for 63 per cent of world traffic, but over 80 per cent in Asia and Oceania.

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<sup>67</sup> The agreements concerned are New Zealand-Singapore, New Zealand-Brunei Darussalam and Marshall Islands-Nauru.