

SECTION II

ECONOMIC AND FINANCIAL SITUATION OF SCHEDULED PASSENGER AIRLINES

II. ECONOMIC AND FINANCIAL SITUATION OF SCHEDULED PASSENGER AIRLINES

104. This section will address general economic and financial developments in commercial air transport services, focusing on scheduled passenger services.⁴⁸ The regulatory framework for air passenger services with regard to bilateral Air Services Agreements has been amply documented in the Quantitative Air Services Agreements Review (QUASAR), which is contained in document S/C/W/270/Add.1.

A. ECONOMIC DEVELOPMENTS

105. Since 2000, the commercial air transport industry has faced many serious difficulties. A cyclical downturn had already begun to be felt by some airlines in 2000, but the terrorist attacks in the United States on 11 September 2001, the Iraq war in March 2003 and the Severe Acute Respiratory Syndrome (SARS) epidemic, followed by escalating fuel prices, turned the cyclical decline into the longest and deepest crisis the industry has ever faced.

106. This section is largely drawn from the Annual Review of Civil Aviation, published by the International Civil Aviation Organisation (ICAO) in its Journal and Annual Report of the Council. As ICAO has discontinued its annual publication, *The World of Civil Aviation*, not all the information contained in the documentation produced for the first review could be updated.

1. Traffic

(a) Global tendencies

107. Tables 6 and 7 illustrate the situation with regard to total (i.e. international and domestic) and international world revenue traffic over the 2000-2005 period. (Comparable data for the 1993-1999 period can be found in tables 15 and 16 on pages 158-9 of the compilation of the documentation produced for the first review.) The impact of the attacks of 11 September is particularly evident in the drastic fall in traffic figures for 2001. Nonetheless, even before 2001 began, expectations were that the air transport industry would experience sluggish or no annual traffic growth: in the period up to September 2001, the volume of traffic had been virtually unchanged from the same period in 2000.

108. After 9/11, however, traffic volumes deteriorated considerably. For three days following the attacks, all flights to, from or within the United States were banned. In addition to the complete shut-down, the attacks caused many travellers to reduce or avoid air travel, weary of a newly-perceived risk associated with flying. Likewise, many businesses put temporary freezes on all but the most essential travel for their employees. And, even after the initial fear of flying dissipated, the stringent new security requirements that were implemented as a direct result of the attacks have made travelling by air more cumbersome and time-consuming than prior to 11 September 2001.⁴⁹

109. Even though the traffic shock was felt most severely in the United States, traffic was adversely affected in most regions. According to the Association of European Airlines, between 11 September and the end of 2001 traffic on the North Atlantic routes dropped by 30 per cent, translating to a loss of almost 3 million passengers for European airlines. US carriers lost another 3 million or so passengers. Traffic on the trans-Pacific routes from the United States dropped by over

⁴⁸ For a definition of scheduled services, please refer to the compilation of the documentation for the first review, page 259.

⁴⁹ Ito, H and L. Darin (2005), "Assessing the Impact of the September 11 Terrorist Attacks on US Airline Demand", *Journal of Economics and Business*, vol. 57(1). The authors estimate that the events of 9/11 led to both an initial demand shock of more than 30 per cent as well as an on-going downward shift in the demand for commercial air services of roughly 7.4 per cent.

35 per cent, traffic between Europe and the Far East by 17 per cent and intra-European traffic by 12 per cent.⁵⁰

110. In 2002, international scheduled traffic showed an increase of about 2 percent over 2001 in the number of passengers carried. There was, however, little change in total traffic, mainly due to the continued weakness in North American domestic traffic. It was only in 2003 that total traffic started picking up again, in spite of the outbreak of SARS in the first half of the year. The epidemic had a significant impact on passenger traffic to, from and within the affected areas. 2004 witnessed a relatively strong traffic increase, reflecting in part the recovery in traffic carried by the airlines of the Asia/Pacific region.

111. From 2004 onwards, traffic growth has been slowing. The traffic increases achieved in 2005 came at a time of sharp fuel price increases (a 49 per cent average increase over 2004) and when carriers in most regions passed on the impact of this increase to passengers by increasing fares. Preliminary forecasts for 2006 point to a total traffic growth, when measured in Revenue Passenger-Kilometres (RPK) of around 5.5 per cent. For 2007, the International Air Transport Association (IATA) predicts a 5 per cent rise, while ICAO a more optimistic 5.8 per cent.⁵¹

Table 6
World total international and domestic revenue traffic, 2000-2005
(Scheduled services of airlines of ICAO Contracting States)

Year	Passengers carried		Passenger-kilometres	
	Millions	Annual increase %	Millions	Annual increase %
2000	1,672	7	3,037,530	9
2001	1,640	-2	2,949,550	-3
2002	1,639	0	2,964,530	1
2003	1,691	3	3,019,100	2
2004	1,888	12	3,445,300	14
2005	2,022	7	3,719,700	8

Source: ICAO, Annual Report of the Council, 2005.

Table 7
World international revenue traffic, 2000-2005
(Scheduled services of airlines of ICAO Contracting States)

Year	Passengers carried		Passenger-kilometres	
	Millions	Annual increase %	Millions	Annual increase %
2000	542	10	1,790,370	10
2001	536	-1	1,726,580	-4
2002	547	2	1,736,070	1
2003	561	3	1,738,510	0
2004	647	15	2,015,070	16
2005	704	9	2,197,360	9

Source: ICAO, Annual Report of the Council, 2005.

⁵⁰ Doganis, R. (2006), "The Airline Business", Routledge.

⁵¹ Airline Business, February 2007.

(b) Regional developments

112. The traffic picture at the regional level is more varied. As shown by Table 8, North America and Latin America and the Caribbean have suffered the heaviest and longest downturns post-9/11, with respect to both total and international passenger traffic. (Comparable data for the 1993-1998 period can be found in table 19 on page 163 of the compilation.) Europe was also seriously affected: passenger-kilometre numbers for the region took two years to recover to the pre-2001 levels. By contrast, Africa experienced a more contained downturn, and only in 2002 was a decline registered with regard to total traffic. Asia and the Pacific were more affected by the SARS epidemic in 2003 than by the events of 9/11. The Middle East was remarkably resilient, and managed to record positive growth rates throughout the period under review.

Table 8
Regional distribution of scheduled traffic, 2000-2005
(Scheduled Services of Airlines of ICAO Contracting States)

Total (international and domestic) services of airlines of ICAO Contracting States Passenger-kilometres performed (millions); (percentage of world traffic)						
Year Region	2000	2001	2002	2003	2004	2005
Europe	805 260 (26.7%)	787 410 (26.9%)	769 710 (26.2%)	824 000 (27.5%)	919 930 (26.7%)	1 004 880 (27%)
Africa	66 470 (2.2%)	67 260 (2.3%)	66 200 (2.3%)	66 930 (2.2%)	75 220 (2.2%)	84 830 (2.3%)
Middle East	93 770 (3.1%)	96 840 (3.3%)	106 700 (3.6%)	117 550 (3.9%)	148 320 (4.3%)	168 890 (4.5%)
Asia/Pacific	733 310 (24.3%)	736 040 (25.1%)	785 110 (26.7%)	759 140 (25.4%)	903 730 (26.3%)	967 400 (26%)
North America	1 176 810 (39.0%)	1 108 780 (37.8%)	1 082 340 (36.8%)	1 086 760 (36.3%)	1 247 260 (36.2%)	1 334 520 (35.9%)
Latin America and Caribbean	142 170 (4.7%)	134 040 (4.6%)	132 330 (4.5%)	137 250 (4.6%)	147 330 (4.3%)	159 170 (4.3%)
Total	3 017 790	2 930 370	2 942 410	2 991 620	3 441 790	3 719 700
International services of airlines of ICAO Contracting States Passenger-kilometres performed (millions); (percentage of world traffic)						
Year Region	2000	2001	2002	2003	2004	2005
Europe	679 860 (38.2%)	659 130 (38.4%)	643 840 (37.2%)	695 000 (40.1%)	785 830 (39.0%)	865 880 (39.4%)
Africa	56 870 (3.2%)	58 300 (3.4%)	57 480 (3.3%)	56 830 (3.3%)	64 330 (3.2%)	72 200 (3.3%)
Middle East	81 850 (4.6%)	84 140 (4.9%)	93 490 (5.4%)	104 760 (6%)	132 930 (6.6%)	152 490 (6.9%)
Asia/Pacific	518 810 (29.2%)	502 280 (29.4%)	537 620 (31%)	497 310 (28.7%)	588 000 (29.2%)	622 520 (28.3%)
North America	354 640 (19.9%)	331 030 (19.3%)	322 360 (18.6%)	298 300 (17.2%)	354 350 (17.6%)	389 200 (17.7%)
Latin America and Caribbean	86 570 (4.9%)	78 680 (4.6%)	77 380 (4.5%)	82 180 (4.7%)	88 030 (4.4%)	95 070 (4.3%)
Total	1 778 600	1 716 560	1 732 160	1 734 370	2 013 470	2 197 360

Note: The sum of the individual regions may not match the due to rounding.

Source: ICAO, Annual Report of the Council, 2000 to 2005.

113. In terms of regional distribution of total scheduled traffic, Africa's contribution has remained substantially unchanged between 2000 and 2005. Over the same period, Europe's share has experienced a small increase, whereas the Asia/Pacific region and the Middle East have both made more significant inroads. By contrast, both Latin America and the Caribbean and North America have seen their respective shares fall, particularly in North America, even though the airlines of the region still dominate total world traffic, with 35.9 per cent of all traffic in 2005.

114. Similar tendencies can be observed for international scheduled traffic, except that the share of the Asia/Pacific region has fallen between 2000 and 2005 and that European airlines account for the largest share of international traffic, with 39.4 per cent in 2005. Particularly noticeable is the increase in the share of international traffic accounted for by Middle Eastern airlines, from 4.6 per cent in 2000 to nearly 7 per cent in 2005.

2. Employment

115. Table 9 seeks to provide some information about airlines' employment by region. It is based on data about direct employment (i.e. the number of people directly employed by airlines) and total employment, which is the sum of direct, indirect (i.e. the number of jobs generated through purchases of goods and services from airlines in their supply chain) and induced (i.e. through spending by airline employees) employment.

Table 9
Airlines' direct and total employment by region, 2004

Region	Airlines employment	
	Direct	Total
Africa	82,562	216,725
Asia/Pacific	498,613	1,308,859
Europe	709,272	1,861,839
Latin America and the Caribbean	84,250	221,156
Middle East	127,764	335,379
North America	544,778	1,361,944
Total	2,047,239	5,305,902

Note: Total employment includes direct, indirect and induced employment.

Source: Air Transport Action Group (ATAG), "The economic and social benefits of air transport", September 2005.

3. Operations of the major passenger carriers

116. The following tables provide an overview of the operations of the top 200 passenger carriers. Table 10 offers an analysis by region for 2005. (Comparable data for 1998-1999 can be found in table 2 on page 260 of the compilation.)

Table 10
Top 200 passenger airlines' operations, by region, 2005

Region	Pax traffic (RPK)		Load factors		Passengers		Share of top 200 ranking by:	
	million	change 2004/5	%	change 2004/5	million	change 2004/5	RPK	carriers
Africa	73,439	6.5%	68.1	-0.4	31	5.2%	1.9%	10
Asia/Pacific	1,019,048	10.1%	72.3	0.7	499	10.3%	25.8%	45
Europe	1,155,998	7.4%	77.2	0.6	587	6.7%	29.3%	82
Middle East	164,062	10.4%	71.7	0.7	60	6.8%	4.2%	10
North America	1,377,568	6.4%	77.5	2.1	793	5.8%	34.9%	37
Latin America and the Caribbean	157,355	15.2%	71.6	2.1	95	15.8%	4.0%	16
Total	3,947,469	8.2%	75.3	1.2	2,065	7.6%	100.0%	200

Notes: Pax = Passengers. RPK = Revenue Passenger-Kilometre. Load factor = percentage of seats available that are actually purchased by passengers. Figures based on returns to the latest top 200 ranking. Changes figures are recalculated to exclude carriers for which data was not available in both years. Other figures are bare totals. Nominal yields are calculated in US dollar terms with no adjustment for exchange rate fluctuations. RPK=Revenue Passenger-Kilometres.

Source: Airline Business, August 2006.

117. A comparison with the situation in 1999, at the time of the first review (see compilation, page 260, Table 2), shows that, in terms of RPK, the Asia/Pacific region and the Middle-East, particularly, have seen their share in the top 200 ranking increase, growing from 22.9 and 2.5 per cent to 25.8 and 4.2 per cent, respectively. This has taken place mainly at the expense of the major airlines in North America, which have seen their share of RPKs transported by the top 200 airlines fall from 38.7 to 34.9 per cent.

118. In terms of number of carriers in the top-200 rank, Europe has witnessed the largest increase between 1999 and 2005, going from 71 to 82 airlines, in spite of an unchanged share in terms of RPKs, followed by the Asia/Pacific region, which saw 45 of its carriers in the top 200 rank in 2005 compared with only 40 in 1999. The biggest fall was experienced by Africa, which lost a third of its airlines in the top 200 rank between 1999 and 2005.

119. Table 11 provides details of the operations of the top 50 passenger airlines, ranked by traffic, for 2005. (Comparable data for 1999 can be found in table 3 on page 263 of the compilation.)

Table 11
Top 200 passenger airlines' operations, ranked by traffic, 2005

Ranking 2005	Airline operation	Country	Pax traffic (RPK)		Seat capacity (ASK)		Load factor		Pax numbers	
			million	change	million	change	percent	change	million	change
1	American Airlines	United States	222,412	6.3%	283,062	1.2%	78.6%	3.8%	98.0	7.1%
2	Delta Air Lines	United States	193,006	5.9%	252,279	3.4%	76.5%	1.8%	118.9	0.2%
3	Air France-KLM Group	France	189,253	8.6%	234,669	6.2%	80.7%	1.8%	70.0	6.4%
4	United Airlines	United States	183,262	-0.6%	224,948	-3.3%	81.5%	2.2%	66.7	-5.8%
5	Northwest Airlines	United States	121,994	3.4%	147,666	0.4%	82.6%	2.4%	56.5	2.0%
6	Continental Airlines	United States	114,659	8.4%	144,240	5.9%	79.5%	1.9%	44.9	5.1%
7	British Airways	United Kingdom	111,859	3.7%	147,934	2.6%	75.6%	0.8%	35.6	-0.2%
8	Lufthansa	Germany	108,185	4.0%	144,182	2.5%	75.0%	1.0%	51.3	0.7%
9	Japan Airlines Corporation	Japan	100,345	-2.0%	148,591	-2.2%	67.5%	0.2%	58.0	-2.4%
10	Southwest Airlines	United States	96,899	12.7%	137,043	10.8%	70.7%	1.2%	77.7	9.6%
11	Qantas Airways	Australia	86,986	7.0%	114,003	9.4%	76.3%	-1.7%	32.7	8.6%
12	Singapore Airlines	Singapore	82,742	6.6%	109,484	4.6%	75.6%	1.3%	17.0	6.6%
13	Air Canada	Canada	75,290	7.7%	94,703	4.0%	79.5%	2.7%	30.0	9.5%
14	Cathay Pacific	China	65,110	13.7%	82,766	11.8%	78.7%	1.3%	15.4	13.0%
15	US Airways	United States	62,582	-2.7%	82,893	-3.2%	75.5%	0.4%	40.0	-3.7%
16	Emirates	UAE	62,260	21.1%	82,009	19.0%	75.9%	1.3%	14.5	15.7%
17	China Southern Airlines	China	61,923	66.5%	88,361	64.3%	70.1%	0.9%	44.1	56.4%
18	All Nippon Airways	Japan	58,949	1.4%	86,933	0.6%	67.8%	0.6%	49.9	2.2%
19	Air China	China	52,453	12.5%	70,670	8.9%	74.2%	2.3%	27.7	13.0%
20	Thai Airways	Thailand	49,930	-1.4%	69,843	0.0%	71.5%	-1.0%	18.1	-7.2%
21	Iberia Airlines	Spain	49,060	6.8%	63,628	4.2%	77.1%	1.9%	27.7	3.7%
22	Korean Air	Rep. of Korea	49,046	6.9%	68,659	6.4%	71.4%	0.3%	21.7	2.0%
23	Malaysia Airlines	Malaysia	46,122	4.3%	65,099	1.5%	70.9%	1.9%	17.9	2.1%
24	America West Airlines	United States	39,030	4.0%	49,079	1.2%	79.5%	2.1%	22.1	4.7%
25	Alitalia	Italy	37,969	12.1%	53,108	11.2%	71.5%	0.6%	23.9	7.4%
26	China Eastern Airlines	China	36,381	31.9%	52,428	26.0%	69.4%	3.1%	24.3	37.2%
27	JetBlue Airways	United States	32,502	28.4%	38,138	25.3%	85.2%	2.0%	14.7	25.0%
28	Virgin Atlantic Airways	United Kingdom	32,118	6.3%	43,102	10.9%	74.5%	-3.2%	4.5	4.4%
29	China Airlines	Chinese Taipei	32,048	8.4%	41,914	9.3%	76.5%	-0.6%	9.7	9.1%
30	Ryanair	Ireland	31,205	38.4%	36,612	35.7%	85.0%	1.0%	33.4	25.6%
31	Varig	Brazil	28,506	0.7%	38,064	-1.4%	74.9%	1.6%	12.8	3.6%
32	Saudi Arabian Airlines	Saudi Arabia	27,455	6.3%	43,147	3.8%	63.6%	1.5%	16.9	7.2%
33	easyJet	United Kingdom	27,448	27.3%	32,141	26.3%	85.4%	0.9%	29.6	15.1%
34	Alaska Airlines	United States	27,216	4.2%	35,868	0.1%	75.9%	3.0%	16.8	2.9%
35	Air New Zealand	New Zealand	25,568	6.8%	34,091	6.6%	75.0%	0.2%	11.7	7.3%
36	South African Airways	South Africa	24,300	5.3%	34,910	4.8%	69.6%	0.4%	7.1	4.6%

Ranking 2005	Airline operation	Country	Pax traffic (RPK)		Seat capacity (ASK)		Load factor		Pax numbers	
			million	change	million	change	percent	change	million	change
37	Thomsonfly	United Kingdom	23,266	9.5%	26,500	11.5%	87.8%	-1.6%	9.5	9.9%
38	EVA Air	Chinese Taipei	23,099	6.2%	29,348	7.3%	78.7%	-0.8%	5.9	8.6%
39	Austrian Airlines	Austria	22,894	7.6%	30,887	5.7%	74.1%	1.3%	10.1	7.7%
40	Condor Flugdienst	Germany	22,245	3.4%	25,835	3.2%	86.1%	0.1%	7.4	3.7%
41	THY Turkish Airlines	Turkey	21,318	14.6%	29,805	12.6%	71.5%	1.3%	14.1	17.9%
42	Aeroflot Russian Airlines	Russian Fed.	20,750	0.5%	30,029	0.2%	69.1%	0.2%	6.7	1.7%
43	Air Berlin	Germany	20,527	18.8%	26,102	12.2%	78.6%	4.7%	13.5	12.2%
44	Air India	India	20,511	8.0%	30,966	12.7%	66.2%	-2.9%		
45	Swiss	Switzerland	20,469	-3.9%	26,193	-7.7%	78.2%	3.1%	9.6	-1.2%
46	TAM Linhas Aéreas	Brazil	19,797	42.9%	28,024	33.5%	70.6%	4.7%	19.6	44.4%
47	Asiana Airlines	Rep. of Korea	19,225	-2.5%	26,244	-5.6%	73.3%	2.3%	11.8	-3.6%
48	LTU International Airways	Germany	18,206	-1.0%	22,268	4.4%	81.8%	-4.4%	5.6	-5.1%
49	AirTran Airways	United States	18,184	33.3%	24,730	28.3%	73.5%	2.7%	16.6	26.3%
50	Qatar Airways	Qatar	17,891	47.0%	24,788	39.9%	72.2%	3.5%	5.8	28.9%

Notes: Pax = passengers. RPK = Revenue Passenger-Kilometre. ASK = Available Seat-Kilometre. Load factor = percentage of seats available that are actually purchased by passengers.

Source: Airline Business, August 2006.

B. FINANCIAL PERFORMANCE

120. The financial performance of scheduled airlines has been marked by the many adverse external shocks during the period under review. However, airlines have also had to contend with dynamic and potentially destabilising internal developments, and in particular the competitive threat posed by low-cost carriers.

121. Table 12 provides information about operating and net results for the scheduled airlines of ICAO Contracting States during the period under review, while Chart 1 depicts the trend with regard to net results. (Comparable data for the period 1993-1999 can be found in table 17 on page 160 of the compilation.)

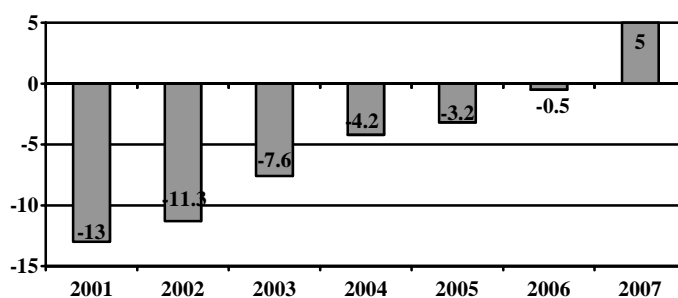
Table 12
Operating and net results¹, 2000-2005
(Scheduled airlines of ICAO Contracting States²)

Year	Operating revenues (US\$ million)	Operating expenses (US\$ million)	Operating result		Net result ³	
			(US\$ million)	% of operating revenues	(US\$ million)	% of operating revenues
2000	328 500	317 800	10 700	3.3%	3 700	1.1%
2001	307 500	319 300	-11 800	-3.8%	-13 000	-4.2%
2002	306 000	310 900	-4 900	-1.6%	-11 300	-3.7%
2003	321 800	323 300	-1 500	-0.5%	-7 560	-2.3%
2004	378 800	375 500	3 300	0.9%	-5 570	-1.5%
2005 ⁴	413 300	409 000	4 300	1.0%	-3 200	-0.8%

- Notes:
1. Revenues and expenses are estimated for non-reporting airlines.
 2. Up to and including 1997 it excludes operations within the Commonwealth of Independent States.
 3. The net result is derived from the operating result by adding (with plus or minus sign as appropriate) non-operating items (such as interest and direct subsidies) and income tax. The operating and net results quoted, particularly the net results, are the small differences between the estimates of large figures (revenues and expenses) and are therefore susceptible to substantial uncertainties.
 4. Preliminary data. The net results for 2005 have been estimated after excluding a provision of US\$ 20.7 billion for reorganization expenses set aside by United Airlines. These expenses will be recorded in the next financial year once the impact of the reorganization costs is known.

Source: ICAO, Annual Report of the Council, 2005.

Chart 1
Net results, 2000-2007
(US\$ billion)



Note: 2007 figures are estimates.

Source: IATA Annual Report, 2006; Les Echos, June 2007.

122. As a whole, the industry has not been profitable since 2000. The vast loss recorded in 2001 reflects the impact of the events of 11 September, as well as the general economic slowdown. From a regional standpoint, carriers in North America were those most severely hit, accounting for 94 per cent of the total operating losses for the year. Results in 2002 were still significantly affected by the slow economic recovery and the lingering effects of 9/11, while the 2003 figures reflect the relative improvement in the operating results of North American carriers, although this was diluted by a sluggish economy, security concerns related to military events in the Gulf region and the impact of the SARS outbreak. The comparative progress in financial results in 2004 and 2005 was mainly due to the improvement in the results of airlines in Europe and the Asia/Pacific region.⁵²

123. In 2006, net losses are expected to drop to US\$0.5 billion, helped by falling oil prices in the second half of the year and only marginally affected by the fallout, in August 2006, from the discovery of an apparent plot to set off bombs on aircraft flying from London to the United States. The bulk of the net losses in 2006 remains in North America, where, in spite of operating profits rising rapidly, the sector is still carrying heavy debt and restructuring costs.⁵³ 2007 may see the first profit in 6 years for the industry, and forecasts by IATA are of a US\$5 billion net positive result. This is largely a result of, first, US network carriers' restructuring costs expected to be half the US\$6 billion they were in 2006 and, second, stronger than expected passenger demand during the first quarter of 2007, in particular business demand in Asia/Pacific and Europe. IATA has also recently revised upwards its profit forecast for 2008, to US\$9.6 billion, from an earlier estimate of US\$7.6 billion.⁵⁴

C. GOVERNMENT SUPPORT

124. Given the shocks faced by the industry and the size of the losses accumulated during the period under review, heavy capital injections were needed on the part of governments to help keep several of the major airlines afloat. Financial aid included not only monetary disbursements, but also indirect support in terms of loan guarantees, liability protection and insurance coverage, restructuring of loans on low interest rates, optimization of taxation, extension of unemployment and health insurance coverage, grants for retraining and bridging loans to avoid immediate collapse. Quite a few governments also took measures to indemnify their carriers against the risks left open as a result of action taken by the insurance industry following the events of 11 September.⁵⁵

125. In the aftermath of 9/11, it was primarily US airlines that needed to be bailed out by government support and aid.⁵⁶ On 22 September 2001, the US President signed into law the Air Transportation Safety and System Stabilization Act (ATSSSA), which made available funds to compensate US air carriers' losses suffered as a result of the attacks.⁵⁷ Under the Act, up to US\$5 billion in compensation was authorized for direct losses incurred by air carriers as a result of any federal ground stop order issued by the Secretary of Transportation (or its continuation); and for the incremental losses by air carriers incurred beginning 11 September 2001 and ending 31 December 2001, as a direct result of the attacks. At the close of the programme on 31 December 2002, the Department of Transport (DOT) had transferred a total of just over US\$4.6 billion to 426 US carriers.

126. In addition to the federal grants, the Act made available to airlines up to US\$10 billion in federal loan guarantees.⁵⁸ The guarantees were to be allocated to airlines on a discretionary basis by

⁵² Annual Review of Civil Aviation, 2001 to 2005, ICAO Journal.

⁵³ Financial Times, 13 December 2006.

⁵⁴ Airline Business, July 2007.

⁵⁵ Annual Review of Civil Aviation 2001, ICAO Journal, Number 6, 2002.

⁵⁶ The description of the situation in the United States is drawn largely from the Trade Policy Review of the United States, document WT/TPR/S/126, page 134, paragraphs 139-142.

⁵⁷ The Act is available online at: <http://www.treas.gov/offices/domestic-finance/atsb/hr2926.pdf>

⁵⁸ See for example US General Accounting Office, GAO (2001).

the Air Transportation Stabilization Board (ATSB), established for that purpose.⁵⁹ Borrowers had to submit their applications no later than June 2002. Only a few airlines were able, or wished, to obtain loan guarantees, since these were conditional and came with strings attached. For instance, despite being in Chapter 11 bankruptcy protection, United Airlines failed three times to get its loan requests approved by the ATSB, largely because the latter did not consider the airline recovery plan to be viable.⁶⁰

127. Two distinct programmes were established under the ATSSSA to help airlines meet increased insurance costs after September 2001. Under the first Aviation Insurance Program, the Federal Aviation Administration (FAA) provides, *inter alia*, indemnity for third-party aviation war-risk liability beyond US\$50 million per occurrence, following the cancellation of this coverage by commercial insurance underwriters.⁶¹ The current programme has been extended until 31 August 2007. The second programme, also run by the FAA, consists, *inter alia*, of reimbursements to US air carriers for the increase in the cost of insurance premiums, relative to the premium that was in effect at the beginning of September 2001. Payments for this support were to be made from a revolving fund established for this purpose.⁶² Approximately US\$60 million was disbursed for 30 days of additional war risk premium expense immediately after 11 September 2001. According to the authorities, no further payments were being made or contemplated.

128. Furthermore, US airlines began to reduce or postpone contributions into their employees' pension funds. For example, upon entering Chapter 11 for the second time in mid-September 2004, US Airways told the bankruptcy judge it would terminate its defined benefit pension plans and would not make a US\$110 million pension payment due. In August 2006, a new bill allowed carriers in Chapter 11 a much longer time to repay deficits in their retirement schemes, adding a decade to the seven years previously allowed.⁶³

129. All major US legacy carriers, with the exception of American Airlines and Continental Airlines, filed for Chapter 11 bankruptcy protection during the period under review. In Chapter 11 of the Bankruptcy Code, a company is protected from creditors while it keeps operating and tries to cut costs and reorganize. US Airways had filed for bankruptcy court protection in August 2002, followed in December of the same year by United Airlines. By the time Northwest Airlines and Delta Airlines also filed for Chapter 11, in September 2005, insolvent carriers operated more than 40 per cent of domestic capacity. By May 2007, all four major legacy carriers had reorganised and exited from Chapter 11.⁶⁴

130. Elsewhere too governments had to intervene to prop up their collapsing airlines. In December 2000, the Malaysian government bought back almost 30 per cent of Malaysian Airlines in order to try to rescue it. A year later, in October 2001, the New Zealand government injected NZ\$885 million to buy back and rescue Air New Zealand.

131. In 2002, the Brazilian Government approved a comprehensive aid package for Brazilian carriers which included a provision for US\$320 in tax relief.⁶⁵ This did not prevent the disintegration of Varig, once Brazil's leading international airline. Varig was placed under judicial reorganisation

⁵⁹ The Regulations for Air Carrier Guarantee Loan Program are found in the Federal Register of 12 October 2001 and available online at: http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2001_register&docid=f:12ocr2.pdf

⁶⁰ Doganis, R. (2006), "The Airline Business", Routledge.

⁶¹ Information available online at: <http://insurance.faa.gov>

⁶² The legislation is available online at: <http://apo.faa.gov/Insurance/49USC443.pdf>

⁶³ Doganis, op. cit; Airline Business, September 2006; Aviation Week & Space Technology, 24 October 2005.

⁶⁴ Business Travel News Online, June 11 2007, available at: http://www.btnmag.com/businesstravelnews/headlines/airline_display.jsp?vnu_content_id=1003596963

⁶⁵ Annual Review of Civil Aviation 2002, ICAO Journal, Number 6, 2003.

proceedings in 2005 and substantially downsized in 2006, only to be purchased by Brazil's low-cost carrier Gol in March 2007.

132. In 2004, the Namibian Government injected a further 366 million Namibian dollars into Air Namibia, totalling about 1.8 billion Namibian dollars since 1999. The Government of Trinidad and Tobago provided an emergency cash injection of US\$10 million and a US\$30 million debt-to-equity swap to BWIA West Indies Airways, which had already received about US\$38 million and a debt guarantee since 2002.⁶⁶ The government of Jamaica committed itself to a maximum subsidy of US\$30 million per year for Air Jamaica in 2005.

133. In Europe, despite the large losses being suffered by European airlines, state aid was very limited by comparison to what it had been in the mid-1990s, largely because of the constraints imposed by the European Commission. In 2002, the Commission ruled that the Greek Government needed to recover €160 million of the aid previously granted to Olympic Airways, since the carrier had not implemented the restructuring plan linked to aid approval. The carrier was subsequently split into two entities, Olympic Airlines and Olympic Airways, but in 2005 once again the Commission ruled that the Greek Government had supplied illegal support worth €540 million.⁶⁷

134. In 2004, the Italian Government decided to provide a bridging loan of €400 million for flag carrier Alitalia, into which the government had already injected capital in 2002 with a condition of restructuring, while in May 2005 the European Commission authorised a rescue aid of about €100 million for Cyprus Airways by the Government of Cyprus.⁶⁸

⁶⁶ Annual Review of Civil Aviation 2004, ICAO Journal, Number 6, 2005.

⁶⁷ Annual Review of Civil Aviation 2002, ICAO Journal, Number 6, 2003; Airline Business, October 2005.

⁶⁸ Annual Review of Civil Aviation 2004 and 2005, ICAO Journal, Number 6, 2005 and 2006.

SECTION III

ECONOMIC AND REGULATORY DEVELOPMENTS IN SPECIFIC AREAS

PART A

LOW-COST CARRIER SERVICES

III. ECONOMIC AND REGULATORY DEVELOPMENTS IN SPECIFIC AREAS

A. LOW-COST CARRIER SERVICES

135. The low-cost/low-fare airline business model was originally developed and successfully implemented in the United States following deregulation of the domestic air transport sector in the 1970s. A US regional carrier, Southwest Airlines, re-launched itself as the first low-cost airline in 1971, offering low-fare services from its hub at Love Field, a secondary airport in Dallas, Texas. Southwest currently carries over 65 million passengers a year and is the most profitable US airline.⁶⁹

136. The low-cost phenomenon has since spread globally. In Europe, following the Commission-driven process of liberalisation of air transport between 1987 and 1997, it was pioneered by Ryanair, which is now the largest intra-European carrier. More recently, the process has taken hold in Australia and Latin America and is experiencing its most dramatic expansion in Asia. Low-cost carriers (LCCs) are being set up also in Africa and the Middle-East.

137. Although no comprehensive data are available, the following figures might give an idea of the strength and spread of the low-cost model. Between 2000 and 2003, the capacity operated by LCCs globally grew by 69 per cent, compared with an 8 per cent fall in legacy airline capacity. In turn, this underscores the resilience of the low-cost model to recession thanks to low baseline costs and the traditional focus on domestic, as opposed to international, markets. Over the same period, the number of flights operated by LCCs worldwide increased by 50 per cent, to 42,490 per week. In Australia and New Zealand, LCC flight numbers grew tenfold, from 136 flights per week to 1,340; in the more mature markets of Europe and the United States, they were up by 140 per cent and 27 per cent, respectively.⁷⁰ By January 2007, LCCs accounted for 18% of worldwide capacity offered, equivalent to about one in six seats, up from 16 per cent a year earlier and just 9 per cent in 2002.⁷¹

1. What makes a carrier low-cost?

138. Although the term "low-cost carrier" is frequently used in a generalising manner, as if these airlines were homogeneous entities, there exist in fact many variations to the model and great diversity between airlines.

139. A low-cost airline in its purest form is based on the Southwest model. It operates from less-congested, secondary and regional airports where charges are lower, delays are rare and turnaround of the aircraft can be achieved much more quickly than at busy, hub airports. A rapid turnaround time – i.e. the time it takes to land an aircraft, disembark passengers, re-fuel if necessary, board the next flight and take off – is key to improving aircraft efficiency.⁷² A low-cost carrier serves short- to medium-haul, point-to-point destinations, which means that aircraft are back at the base at the end of the day. The airline does not provide for any interlining, which allows for savings to be made on the management of connections and baggage.

140. A "pure" LCC's fleet is made up of a single aircraft type, which allows all pilots, cabin crew and engineers to operate on any aircraft of the fleet, thereby reducing training and maintenance costs and the cost of aircraft financing. A LCC markets itself on price with a single-class offering and

⁶⁹ European Low Fares Airlines Association (2004), "Liberalisation of European Air Transport: The Benefits of Low Fare Airlines to Consumers, Airports, Regions and the Environment", available at <http://www.elfaa.com>

⁷⁰ Speech by Peter Harbison, Managing Director, Centre for Asia-Pacific Aviation, at the "Low Cost Airline Symposium", July 2004.

⁷¹ La Tribune, 6 September 2006; Centre for Asia-Pacific Aviation, "Centreline", 14 February 2007.

⁷² A 20-25 minutes turnaround time is what LCC aim to achieve (see, for example, <http://www.easyjet.com/common/img/UBSTransportConference19thSept05.pdf>).

provides a "no frills" service, where all extras (such as in-flight catering, entertainment programmes, seating assignments) need to be paid for. The absence of a business class and limited catering allow for higher seating density and hence higher capacity utilisation.⁷³

141. In terms of distribution, a LCC relies heavily on direct sales through the internet and/or call centres. This permits savings on travel agents' commissions and Global Distribution Systems fees, in addition to the savings linked to the use of electronic tickets, which eliminate the need for the expensive ticket emission process.

142. Figure 4 provides a breakdown of the various efficiencies achieved by LCCs.

Figure 4
Economic advantages of the low-cost model

LCCs	Traditional airlines		LCC advantages
Operate from mostly secondary, underutilised, regional airports	Operate from mostly primary international hub airports	→	Lower airport charges, faster turnaround times, less air traffic control-related delays
Fast turnarounds (25min.)	Slow turnarounds due to use of congested hub airports	→	Better fleet utilisation
Direct point-to-point flights, no transfers, short-haul routes	Mix of long, medium and short haul routes with transfers ("connecting flights")	→	Lower complexity, higher capacity utilisation
Standardised fleet (only one aircraft type), higher seating density	Various aircraft types, low seating density	→	Cheaper aircraft financing, lower maintenance and training costs, simpler swapping around of flight and maintenance staff, higher capacity utilisation
Distribution primarily through direct channels (internet, call centres)	Most tickets sold via travel agencies (high GDS costs, travel agent commissions, etc.)	→	Lower distribution costs, lower complexity
No "frills", extras paid for (e.g. catering, excess baggage)	Entertainment programmes, express check-in, VIP lounges, paper tickets, business class, "free" catering	→	Lower ancillary costs, less complexity, additional revenues
Highly incentivised work force (variable proportion of salary up to 40 per cent)	High basic salaries (variable proportion less than 10 per cent)	→	High employee productivity

Source: European Low Fares Airlines Association, 2004.

143. A study by the European Cockpit Association shows that, when all factors are taken into account, LCCs have a cumulative advantage in operating costs of 57 per cent compared to traditional, full-service carriers.⁷⁴ The high-density aircraft seating configuration alone provides it with an average 16 per cent cost advantage. Whereas a traditional airline would configure a Boeing 737-300

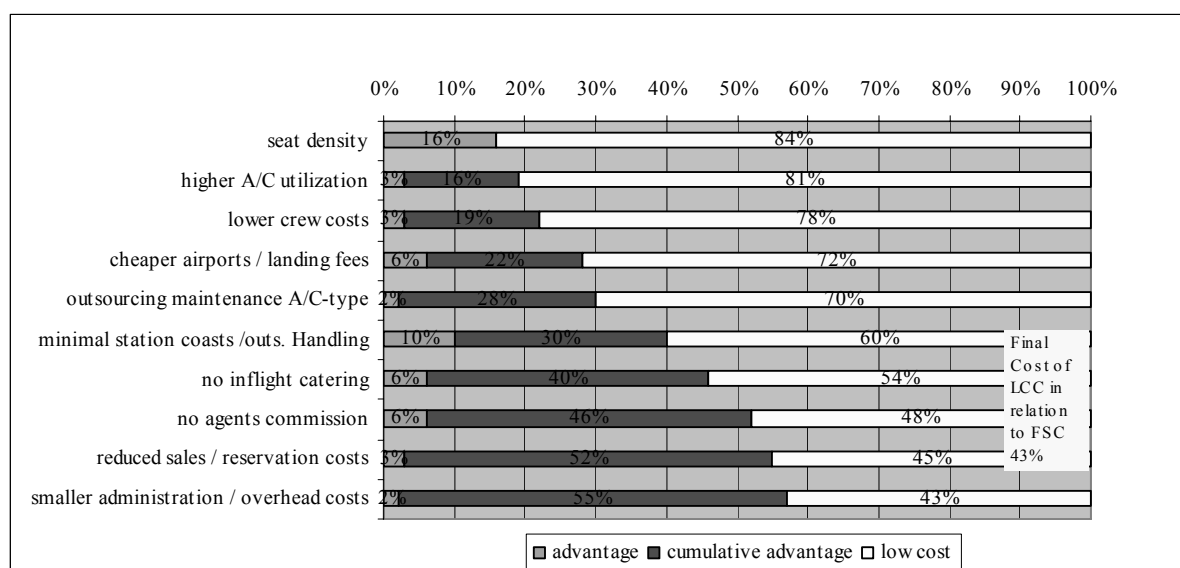
⁷³ The European average is more than 11 hours a day (Les Echos, 3 February 2003).

⁷⁴ European Cockpit Association (ECA) (2002), "Low Cost Carriers in the European Aviation Single Market", ECA Industrial Sub Group, available on-line at <http://www.eurocockpit.be>

for 109 seats and include a business class, London-based LCC easyJet fits 130 seats in the same aircraft, i.e. 20 per cent more seats to sell. In the US, Southwest configures its airplanes for 137 seats compared with a full-service carrier's 126.⁷⁵

144. Reduced station costs, with fewer personnel at check-ins and on the line, as well as with the outsourcing of many fixed services, such as ground handling and maintenance, enable another 10 per cent of savings. A further 6 per cent comes from flying to cheaper airports, with lower landing fees and handling charges, another 6 per cent from not supplying in-flight catering, and yet another 6 per cent from not paying commissions to travel agents. Three per cent cost savings are obtained, each, from running ticket-less web-based operations, from higher aircraft utilisation and from lower crew costs. With respect to the latter element, the LCCs' cost advantage comes from fewer crew needs, thanks to higher aircraft utilisation, a higher crew workload and fewer overnight stay costs. However, the biggest savings originate from lower basic pay, which is partly compensated by much higher variable pay, making up close to 40 per cent of the crew's overall income. A single aircraft fleet, resulting in easier and more predictable maintenance work and greater efficiency in crew deployment, and lower overheads and administration costs contribute each an additional saving of 2 per cent. Chart 2 illustrates the situation.

Chart 2
Low-cost carrier cost advantages



Notes: FSC = Full Service Carrier. A/C = Aircraft.
Source: European Cockpit Association, 2002.

145. Several variations have evolved from the Southwest-inspired business model for a low-cost airline. While some LCCs, such as Ryanair, are taking the no-frills philosophy to its limits, by charging for elements of air transport that were once thought of as part of the ticket price, such as checked baggage, and simultaneously increasing their reliance on revenue from such "ancillary" services, including seat assignments, car-hire, hotel bookings and insurance,⁷⁶ these carriers now tend to be more the exception than the rule.

146. Numerous LCCs offer at least some "frills", such as in-flight entertainment or catering. This is not only true of the South-East Asian market, where the distances flown are often longer, but also in

⁷⁵ Interavia, March/April 2003.

⁷⁶ According to Airline Business (March 2006), Ryanair's ancillary sales now account for 15 per cent of total revenues, and the carrier aims to boost them to 20 per cent over the next three to five years. Ancillary sales already account for 20 per cent of the revenues of Allegiant Air, a LCC based in Las Vegas.

more mature markets such as the US, where market saturation is forcing LCCs to consider alternative business models, at times even improving on the product offering of the legacy carriers.⁷⁷

147. Others have launched business class-only services at low-fares. MAXjet and EOS, two American carriers, started flying in the autumn of 2005 between New York and London with aircraft configured in a single class, MAXjet in business class and the EOS in first class, but charging much lower fares than the majors. UK-based Silverjet launched in January 2007 a daily flight on the same route, and is reported as planning the addition to services on less dense routes in 2008.⁷⁸ New French carrier L'Avion also started in January 2007 to offer an all-business class service between Paris and New York at a charge of, on average, about 50 per cent below traditional airlines.⁷⁹

148. Some LCCs are attempting to apply the low-cost model to long-haul travel. For instance, Zoom, a Canadian start-up, began offering low-fare scheduled services from Canada to the UK and Paris. Qantas of Australia is using its domestic low-cost subsidiary Jetstar as a medium/long-haul carrier, focusing on destinations between six and ten hours from Australia, and Australia's Virgin Blue is considering serving the US West Coast. Oasis Airlines of Hong Kong, China launched low-fare scheduled services to the UK and Canada and is looking at serving other routes to Europe and North America, as is Viva Macau, which plans to serve European, Australian and Middle Eastern destinations.⁸⁰ Malaysia's AirAsia, Asia's most successful LCC, is launching AirAsia X to serve long-haul Australian and European destinations and aiming at fares 50 to 60 per cent below the lowest offered by other airlines.⁸¹ Ryanair is also reported as considering the launch of a new, independent carrier to serve the long-haul market between Europe and the United States, thus taking advantage of the entry into force of the open skies EU-US air services agreement in March 2008.⁸²

149. No company, however, has as yet found a way of emulating the low-cost success story on long-haul routes. The biggest advantages that LCCs have been able to exploit on short-haul markets are their higher capacity utilisation, high density seating and high load factors. On the long haul, they face plenty of obstacles, starting with the competitive response of the network airlines, which routinely offer low-fares and are able to subsidise them with cargo revenue and high-yield business traffic. Major long-haul airlines also tend to have larger fleets over which to spread fixed costs, interline arrangements which allow them to fill their planes more easily and already achieve high capacity utilisation, making them fairly cost-competitive.⁸³

150. Most industry commentators are of the view that low-cost carriers have left a lasting imprint on the industry and that legacy carriers will have to adapt, leading to progressive convergence of the two business models.⁸⁴ Strategies being pursued or considered by LCCs that would go in this direction are: the offering of frequent flyer schemes, so as to build customer loyalty, gain access to customer data and ensure that loyalty is not exclusively based on price;⁸⁵ the forming of marketing and sales alliances in order to create the impression of a larger route system, whilst trying to avoid the

⁷⁷ JetBlue Airways, for instance, has introduced a live TV service (Airline Business, May 2006).

⁷⁸ Airline Business, March 2007.

⁷⁹ Les Echos, 3 January 2007.

⁸⁰ Airline Business, May 2007, May 2006 and December 2004; Aviation Week & Space Technology, 19 July 2004.

⁸¹ Financial Times, 23 April 2007.

⁸² Airline Business, May 2007.

⁸³ Airline Business, May 2006 and December 2004.

⁸⁴ Airline Business, February 2006.

⁸⁵ For example, Southwest and AirTran have their own frequent flyer reward programmes (Airline Business, March 2004).

complexity of global airline alliances by not offering code-sharing and through-check-in,⁸⁶ and venturing into cargo operations.⁸⁷

2. Economic and regulatory developments by region

151. As LCCs are generally not subject to separate regulatory arrangements, the discussion of the economic and specific regulatory developments that concern this segment of the air transport sector is approached from regional perspective.

152. Historically, LCCs have emerged in domestic or quasi-domestic liberalised environments, such as the United States and the European Union, where they were able to seize the opportunities offered by the introduction of competition. The spectacular growth experienced by LCCs in the Asian, and particularly South-East Asian markets, has come at the surprise of many commentators who questioned the possibility of LCCs thriving in an aeronautical environment still governed by restrictive bilateral air services agreements. Table 13 provides a ranking of the top 40 LCCs by passenger numbers.

⁸⁶ For instance, Germany's Air Berlin and Germania Express have web sites that list a selection of flights offered by their partners (see Aviation Week & Space Technology, 29 March 2004). An interline accord, however, has recently been reached by Virgin Blue and Malaysia Airlines (Airline Business, October 2006).

⁸⁷ Germany's Freshline is claimed to be the first low-cost cargo carrier, planning to fly perishable goods from Africa and the Middle East into Frankfurt Hahn (Airline Business, November 2005) and Macau, China's Viva Macau has been reported as seeing cargo (which could account for around 25 per cent of total revenue) as a very important part of the business, especially given its geographical location on the edge of China's Pearl River Delta which generates around one-third of China's exports.

Table 13
Top 40 low-cost carriers by passenger numbers, 2006

Rank	Carrier	Country	Launch	Pax (m)	Load factors	Notes	
2006	2005						
1	(1)	Southwest Airlines	USA	1971	83.8	73.1 %	
2	(2)	Ryanair	Ireland	1991	42.5	82.0 %	
3	(3)	easyJet	UK	1995	28.0	81.5 %	Source: UK CAA
4	(4)	AirTran Airways	USA	1993	20.1	72.8 %	
5	(6)	Air Berlin	Germany	2002	19.7	77.7 %	Includes DBA
6	(5)	JetBlue Airways	USA	2000	18.6	81.6 %	
7	(8)	Gol Transportes Aereos	Brazil	2001	17.4	73.3 %	Source: ANAC Brazil
8	(7)	Virgin Blue	Australia	2000	14.3	77.5 %	
9	(10)	WestJet Airlines	Canada	1996	11.2	78.2 %	
10	(11)	Lion Airlines	Indonesia	2000	10.0	-	AB estimate
11	(9)	Thomsonfly	UK	2004	9.6	86.9 %	Source: UK CAA
12	(12)	Frontier Airlines	USA	1994	8.9	76.2 %	
13	(13)	germanwings	Germany	2002	7.1	82.2 %	
14		Air Deccan	India	2003	5.9	76.8 %	Source ICAO
15	(18)	Jetstar	Australia	2003	5.8	74.0 %	
16	(17)	AirAsia	Malaysia	2001	5.7	77.5 %	
17	(21)	Norwegian	Norway	2002	5.1	78.6 %	
18	(15)	Spirit Airlines	USA	1990	5.0	78.6 %	
19	(19)	Hapag-Lloyd Express	Germany	2002	4.6	79.3 %	Source: ELFAA
20	(16)	flybe	UK	2002	4.5	63.2 %	Source: UK CAA
21	(20)	bmibaby	UK	2002	4.1	74.4 %	Source: ICAO
22	(22)	Sterling Airlines	Denmark	2000	4.0	82.0 %	
23	(27)	Vueling Airlines	Spain	2004	3.5	69.4 %	
24	(25)	Cebu Pacific Air	Philippines	1996	3.5	75.0 %	
25	(23)	Monarch Scheduled	UK	1986	3.1	-	
26	(28)	WIZZ Air	Hungary	2003	3.0	80.0 %	
27	(24)	Jet2.com	UK	2002	2.8	77.2 %	Source: UK CAA
28	(14)	ATA Airlines	USA	1981	2.6	79.7 %	Scheduled services
29	(29)	SkyEurope Airlines	Slovakia	2001	2.6	75.6 %	
30	(26)	Wind Jet	Italy	2003	2.2	68.0 %	
31	(32)	Allegiant Air	USA	1998	2.2	78.4 %	
32	(30)	SpiceJet	India	2005	1.8	80.0 %	Source: ICAO
33		Kulula	South Africa	2001	1.8	-	AB estimate
34		Air Arabia	UAE	2003	1.7	-	Source: IPO prospectus
35	(30)	Sun Country Airlines	USA	1983	1.6	67.9 %	Source: ICAO
36	(36)	Tiger Airways	Singapore	2004	1.5	-	
37		Click Mexicana	Mexico	2005	1.5	-	
38	(35)	FlyGlobespan.com	UK	2003	1.3	85.5 %	
39	(32)	flynordic	Sweden	2000	1.2	64.0 %	
40	(34)	Myair	Italy	2004	1.1	74.3 %	
Total top 40 carriers					374.7	76.6 %	

Notes: Pax (m) = Passengers (millions). Load factor = percentage of seats available that are actually purchased by passengers. Airline data has largely been sourced from company replies or records and compiled by Airline Business sister online service, Air Transport Intelligence. Estimates have been made for significant carriers for which no figures were made. AB = Airline Business.

Source: Airline Business, May 2006.

153. Interestingly, there is a large degree of correspondence between the ranking of the airlines within each region and the timing of their launch, pointing to the significant impact of first-mover advantages in terms of stimulating demand and building brand power. Financial results (see Table 14) paint a largely similar picture, with Ryanair, AirAsia and Gol, having performed well

enough in 2006 to post operating margins around or over 20 per cent, with Westjet and Southwest next in line with margins over 10 per cent.

Table 14
Financial results¹ for selected low-cost carriers, 2006

Airline	Country	Revenue (US\$ million)	Operating margin		Net result ²		Period end
			2006	2005	2006	2005	
Southwest Airlines	USA	9,086	10.3 %	9.6 %	499.0	484.0	Dec 06
easyJet	UK	2,917	7.3 %	4.9 %	169.5	109.0	Sep 06
JetBlue Airways	USA	2,363	5.4 %	2.8 %	-1.0	-20.3	Dec 06
Ryanair	Ireland	2,096	21.8 %	24.9 %	379.8	348.3	Mar 06
Air Berlin	Germany	2,026	4.0 %	-0.5 %	63.8	-143.5	Dec 06
AirTran Airways	USA	1,893	2.2 %	1.0 %	15.5	2.7	Dec 06
Gol Transportes Aereos	Brazil	1,750	18.4 %	23.3 %	262.0	212.6	Dec 06
WestJet Airlines	Canada	1,572	11.2 %	4.4 %	101.6	19.8	Dec 06
Virgin Blue ³	Australia	1,039	9.6 %	8.8 %	63.4	80.5	Jun 06
germanwings	Germany	706	0.0 %	0.0 %			Dec 06
flybe	UK	541	-1.2 %	4.9 %	-21.8	14.4	Mar 06
Norwegian	Norway	461	-1.1 %	1.3 %	-2.0	4.1	Dec 06
FlyGlobespan.com	UK	385	2.5 %	0.0 %	6.2	5.6	Dec 06
Vueling Airlines	Spain	297	-4.4 %	-14.8 %	-13.6	-13.1	Dec 06
Air Deccan	India	276	-22.0 %	%	-76.0		Jun 06
Allegiant Air	USA	243	9.3 %	6.4 %	8.7	7.3	Dec 06
AirAsia	Malaysia	230	25.0 %	20.0 %	34.1	25.5	Jun 06
Air Arabia	UAE	204	0.0 %	0.0 %	27.5	8.4	Dec 06
SkyEurope Airlines	Slovakia	198	-32.8 %	-29.8 %	-67.1	-36.4	Sep 06

- Notes: 1. Results contain preliminary and un-audited figures.
2. The net result is derived from the operating result by adding (with plus or minus sign as appropriate) non-operating items (such as interest and direct subsidies) and income tax.
3. Virgin Blue 2006 results are for 9 months due to change in financial reporting period.

Source: Airline Business, May 2007.

(a) The Americas

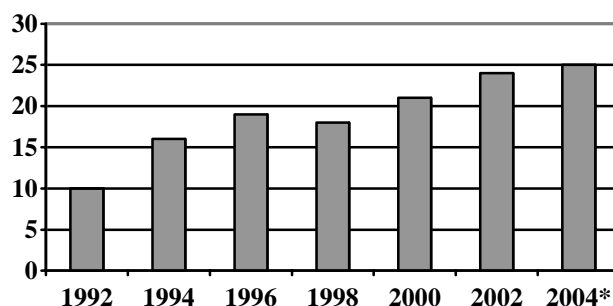
(i) *United States*

154. LCCs have been the fastest growing segment of the air transport market in the US. Chart 3 shows that the LCC share of the US market in terms of domestic passengers has grown from 7 per cent in 1990, with Southwest taking the lion's share, to about one-quarter of all domestic passengers in 2004. Other low-cost airlines, such as AirTran Airways, JetBlue Airways and Frontier Airlines have grown rapidly as well. Some analysts predict that the low-cost segment will account for about 45 per cent of domestic US passengers by 2009.⁸⁸ Some LCC, such as Frontier, are also flying internationally, mainly to warm-weather destinations in Mexico and north of the border to Canada.⁸⁹

⁸⁸ Airline Business, March and May 2005.

⁸⁹ Airlines Business, March 2007.

Chart 3
Share of the low-cost airline sector in the US domestic market, 1990-2004
(Percentage of total domestic passengers)



* Estimate

Sources: Ito, D. and D. Lee (2003), "Low Cost Carrier Growth in the US Airline Industry: Past, Present, and Future", Brown University Economics Department Working Paper, no. 12; European Low Fares Airlines Association, 2004.

155. The scope of LCC services, once limited to a handful of cities, has expanded to reach virtually all corners of the country, to the extent that low-cost airlines are now beginning to serve primary airports in major business centres as well as secondary cities by using smaller aircraft.⁹⁰ Carriers such as JetBlue are now also competing on the cross-country markets that had, until recently, been the exclusive and profitable domain of the network players. Atlanta-based AirTran and Denver-based Frontier, which are, respectively, strong in the east and the west of the country, have also geographically broadened their service territories by forging an unprecedented link-up. The "virtual code share" implies a joint marketing strategy of using web pages and call centre agents to refer travellers to the partner carrier and allows passengers to earn and redeem frequent-flyer miles in either carrier's loyalty programme.⁹¹ Table 15 provides a breakdown of the US domestic market.

Table 15
Share of the top 5 legacy and low-cost carriers in the US domestic market, May 2005
(Percentage of total seat capacity)

Top 5 legacy carriers		Share	Top 5 low-cost carriers		Share
1	Delta Airlines	16.9%	1	Southwest Airlines	11.7%
2	American Airlines	15.8%	2	JetBlue Airways	3.0%
3	United Airlines	13.0%	3	AirTran Airways	2.1%
4	Northwest Airlines	8.6%	4	Song	1.7%
5	Continental Airlines	7.9%	5	Ted	1.7%

Notes: Based on capacity data from OAG schedules for May 2005. Song and Ted = estimated from stated schedules (figures excluded from Delta and United).

Source: Airline Business, May 2005.

156. The rapid growth of LCCs has commonly been cited as one of the primary causes of the financial crisis facing the large hub-and-spoke carriers in the US.⁹² Indeed, competition from low-cost airlines has prompted majors to re-think their strategies. First, many have been seeking to reduce

⁹⁰ Southwest is entering Philadelphia International and Pittsburgh, JetBlue Boston Logan and AirTran Charlotte (Airline Business, May 2005).

⁹¹ Airline Business, December 2006; Aviation Week & Space Technology, 29 November 2006.

⁹² See, for example, "Information Brief of United Airlines, Inc.", in the United States Bankruptcy Court For the Northern District of Illinois, 9 December 2002.

their costs, starting with employee costs, which were one of the biggest points of differentiation.⁹³ By reducing employee costs and raising aircraft utilisation, they saved nearly US\$13 billion over the 2002-2004 period, thereby reducing the cost-disadvantage vis-à-vis the LCCs to about one-third in 2003.⁹⁴ By 2006, US legacy carriers had cut their stage-length-adjusted costs to 7.96 cents per available seat mile. The difference between average unit costs for network carriers and LCC, excluding fuel, fell below two cents in third-quarter 2006, the lowest differential since 2000.⁹⁵

157. Second, in spite of failed past experiments with United's Shuttle, Delta's Delta Express, US Airways' Metro Jet and Continental's Continental Lite, several airlines have revived the idea of creating a low-cost "carrier within a carrier". Over 2003-2004, Delta and United launched new low-cost off-brands, Song and Ted, respectively, in an attempt to compete more directly with LCCs. While enjoying the advantage of serving wide areas through the hub-and-spoke network system of their parent carriers, they found it difficult to adjust labour costs and meet the large and immediate investment requirements needed to promote the new brands effectively.⁹⁶ These have obviously proven too serious for Delta, which in late 2005 announced plans to discontinue its discount carrier Song and incorporate Song's fleet into Delta's regular service.⁹⁷ Analysts predict that continuing LCC pressure on domestic routes is likely to force legacy carriers to reduce further their mainline domestic flying and concentrate on operating between their hubs and international markets.⁹⁸

158. LCCs have proven resilient in the face of the crisis that has swept the US airline industry, especially in the aftermath of September 11, 2001. Carriers such as Southwest and JetBlue have remained consistently profitable, registering in 2002 profits of US\$241 million and around US\$55 million, respectively, against cumulative losses by United, American and Delta Airlines of about US\$8 billion in the same year.⁹⁹ LCCs have not been immune to competitive forces, however. ATA Airlines, a LCC based in Indianapolis and the tenth-largest US carrier, filed for bankruptcy in 2004, whereas Independence Air, a Washington-based low-cost carrier that was launched in 2004, ceased services in early January 2006.

159. New entrants are not necessarily deterred, however. Amongst them, Virgin America, which is 25 per cent owned by the UK's Virgin Group. The carrier is planning to start domestic services out of its San Francisco base on the back of the powerful Virgin brand by operating with unit costs of 20 to 50 per cent below relevant legacy competitors.¹⁰⁰ The carrier's application to launch services was initially turned down by the Department of Transportation (DOT), as its relationship with the Virgin Group and its backing by overseas investors put it in violation of statutes limiting foreign investment in and control of US carriers. Virgin America found new backers with US citizenship, revised its financial and management structure and offered to replace its chief executive to keep the role of the Virgin affiliates at a minimum and, in June 2007, was cleared by the DOT to launch services in the course of the summer.¹⁰¹

(ii) *Canada*

160. The low-cost phenomenon quickly spread from the US to Canada. Calgary-based WestJet, which started out in 1996, operates coast-to-coast, with services also offered to eight US destinations. Its costs are an estimated 38 per cent below rival Air Canada's. In reaction to the competitive pressure coming from WestJet, Air Canada had launched LCC Tango in late 2001, with routes out of Toronto, and Zip a year later to serve Western Canada. However, both carriers were reabsorbed into the

⁹³ At United, for example, labour costs absorb half of revenues, against about one-quarter at JetBlue.

⁹⁴ Airline Business, September 2004.

⁹⁵ Aviation Week & Space Technology, 5 February 2007.

⁹⁶ Aviation Week & Space Technology, 28 June 2004; La Tribune, 24 February 2003.

⁹⁷ USA Today, 28 October 2005.

⁹⁸ Aviation Week & Space Technology, 28 June 2004.

⁹⁹ La Tribune, 24 February 2003.

¹⁰⁰ Aviation Week & Space Technology, 6 February 2006.

¹⁰¹ Airline Business, January, May and July 2007.

mother carrier within a couple of years, in particular following on the agreement to accept further concessions reached by Air Canada with all of its unions. Air Canada also re-defined its business model as a result of LCC competition, by simplifying its fare structure, offering fares linked to various levels of service and charging for in-flight amenities.¹⁰² In 2007, WestJet's share of the domestic market was 36.1 per cent, up from 31.1 per cent in 2006, against Air Canada's 45.4 per cent.¹⁰³

161. Ottawa-based Zoom Airlines, which was launched in 2002, is making use of elements of the low-cost model on long-haul scheduled routes to Europe and the Caribbean. For example, the carrier relies exclusively on direct sales, operates point-to-point with no interlining and charges for seat assignment. Using the same model, it also operates as a charter on about one-third of its routes to destinations where the relevant bilateral air services agreements do not allow for the designation of any more scheduled carriers.¹⁰⁴

(iii) *Brazil, Chile and Mexico*

162. The low-cost model has been slow to take-off south of the US border. This was due not only to market regulation, but the general economic situation and the entrenched position of flag carriers. However, the financial difficulties and collapse of several legacy carriers have meant that new airlines, not least LCCs, are now starting to take their place in a number of countries, and in particular in Brazil and Mexico. These two countries are considered emerging aviation markets, ripe for low-cost travel: they have large populations, under-served cities, traditionally high fares, long distances and large numbers of price-sensitive passengers who had traditionally travelled by bus.

163. Of the four previous big legacy carriers in **Brazil**, two (Vasp and Transbrasil) have been grounded. Varig, the flag carrier, was under bankruptcy protection and re-emerged as VRG Linhas Aéreas, or New Varig, an international carrier with a vastly reduced domestic network. New Varig was recently bought by low-cost carrier Gol (see below).¹⁰⁵ Finally, TAM, which has grown to become Brazil's biggest airline, competes on quality and reliability, rather than on price.

164. The situation has allowed Sao-Paulo based low-cost carrier Gol to grow quickly and be profitable within a year of its launch in January 2001. With a domestic market share nearing 35 per cent, Gol is Brazil's third largest carrier.¹⁰⁶ With its acquisition of New Varig, the combined domestic market share of two airlines will amount to around 50 per cent.¹⁰⁷ Gol does not entirely follow the low-cost model, as, for example, it does not operate point-to-point and half of its customers make a connection. The carrier has targeted the cost-conscious business travellers in a market where 70 per cent of passengers fly on business and only 30 per cent on leisure, while also competing for leisure passengers at off-peak times. Since Gol began operating in 2001, the number of people travelling by air in Brazil has increased from about 5.5 million to 7.5 million in 2005, even if not all the increase is attributable to the LCC. Its only rivals are Webjet and BRA, with the latter having reinvented itself from a charter carrier into a LCC.¹⁰⁸

165. Gol's operations quickly spread beyond Brazil's national borders. In spite of the constraints of having to operate within the framework of fairly restrictive bilateral air services agreements, from 2004 onwards Gol launched flights to Argentina, Uruguay, Paraguay, Peru and Bolivia. It was

¹⁰² Airline Business, October 2002, July 2004, March 2005 and February 2006.

¹⁰³ Airline Business, June 2007.

¹⁰⁴ Airline Business, March 2005.

¹⁰⁵ Airline Business, May 2007; Les Echos, 3 April 2007.

¹⁰⁶ Airline Business, August 2006.

¹⁰⁷ Airline Business, May 2007.

¹⁰⁸ Airline Business, July 2004, August 2005, May 2006; Financial Times, 14 October 2005.

designated to serve Santiago de Chile¹⁰⁹ and is looking to expand into Colombia, Venezuela and Mexico, the latter thanks to fifth freedom rights through Lima.¹¹⁰ The carrier is also pondering setting up domestic units in Argentina and Peru, after shelving plans for a local unit in Mexico, partly due to the proliferation of low-cost Mexican carriers.¹¹¹

166. In response to Gol's competition, **Chile's** LAN is converting LAN Express, its Chilean domestic unit, into a cross-border low-cost carrier. LAN Express hopes to complete its conversion by the end of 2007 and plans to serve destinations in the Southern Cone of Chile, Peru and Argentina.

167. In **Mexico**, LCCs started operating in July 2005 with the launch of Mexicana's Click. Five other airlines have started operating low-cost flights since. These are: Tijuana-based Avolar, Interjet ABC, Aerolineas Mesoamericanas (ALMA), Volaris (a Toluca-based start-up that is expected to begin operations with management and operational aid coming from Central America's Grupo TACA) and VivaAeroBus, which is planning to launch trans-border services from several cities in Mexico to Texas.¹¹² The six airlines combined transported 11.5 million domestic passengers in 2006, compared with 10.6 by the incumbents, equating to a market share of 52 per cent. An estimated half of the growth achieved by Mexico's LCCs is due to low fares, but the other half is a result of incumbent carriers' woes, two of which were grounded for maintenance shortcomings in 2006.¹¹³ Table 16 details the market shares of Mexico's low-cost carriers.

Table 16
Share of low-cost carriers in the Mexican domestic market, 2005 and 2007

Airline	Market share ASK	
	2005	2007
Volaris	-	9.7%
Avolar	-	6.9%
Click	3.0%	6.0%
Interjet	-	4.4%
VivaAeroBus	-	2.8%
ALMA	-	2.5%
Total	3.0%	32.3%

Notes: Data for 2007 are based on schedules 14-20 May 2007. ASK = Available Seat-Kilometre.

Source: Airline Business, June 2007.

(b) Middle East and Africa

168. Low-cost travel is still something of a rarity in the Middle East and Africa. However, it is starting to make an impact, even if most of the new entrants appear to be operating more like lower-fare, than true low-cost, carriers.

169. In the **Middle East**, a region historically dominated by what might be considered an oversupply of publicly-owned carriers, LCCs had a somewhat difficult start, but are rapidly gaining ground¹¹⁴ The region's first LCC, United Arab Emirates' Air Arabia, launched services late in 2003.

¹⁰⁹ <http://www.voegol.com.br/ARG/Noticias/InstGolNoticias.asp>, 26 April 2006. Reportedly, as a reaction to Gol's plans to start serving Santiago, Chile's LAN group is considering launching a new LCC, which would be an international variant of LAN Express, which operates domestically (Airline Business, October 2006).

¹¹⁰ Airline Business, January and February 2007.

¹¹¹ Airline Business, March 2007.

¹¹² Airline Business, August, September and October 2005; Financial Times, 2 March 2006.

¹¹³ Airline Business, April 2007.

¹¹⁴ Plans for a United Arab Emirates-based low-cost airline called Smart Jet had to be suspended in 2003 after the carrier was denied permission to use Dubai International Airport; the launch in mid-2003 of Menajet, an LCC jointly owned by Bahrain and Saudi-based investors, operating out of Sharjah, was delayed apparently because

Owned by the Sharjah Government, it serves 27 destinations, including Bahrain, Oman, Egypt and Lebanon, in addition to the Indian sub-continent. Restrictive elements in bilateral agreements prevent the carrier from serving key markets such as Cairo and Amman.¹¹⁵ Air Arabia aims to attract the estimated 85 per cent of Arab World residents who have never flown. It faces competition from Gulf Traveller of Abu Dhabi, Gulf Air's all-economy (but full-service) lower-fare carrier, which operates to destinations in the Indian sub-continent and Africa.

170. Kuwait-based Jazeera Airways became the Middle East's second LCC in late 2005. Its network has expanded quickly, from five to 21 routes, including seven from a second base in Dubai that opened in March 2007.¹¹⁶

171. In Saudi Arabia, the Government terminated late in 2006 the long-standing monopoly of Saudi Arabian Airlines in the domestic market. Early in 2007, two low-cost airlines were launched. NAS Air and Sama are currently only operating domestic services, but expect to secure approval for international services after the two-year mandatory period serving the domestic market has elapsed. Saudi Arabia is a market where demand for air travel currently outstrips supply, despite the country's average income levels and vast distances, and would therefore seem to offer great potential for low-cost operations. The challenge, however, will be for LCCs to secure and maintain a low-cost base. Many airports in the region are monopolistic, government-owned service providers, and airlines are restricted in their choice of ground-handling and aircraft repair and maintenance providers. Travel agents are expensive distribution channels, but exclusive reliance on online sales is hampered by the limited use of credit cards in the region.¹¹⁷

172. In **Africa**, South Africa's Comair launched Kulula in 2001, while South African Airways is pondering setting up a budget subsidiary to meet the challenge. At the Northern end of the continent, Royal Air Maroc started its own low-cost subsidiary, Atlas Blue, in 2004, to offer competitive point-to-point leisure services between Morocco and key tourism markets. A second LCC, Jet4you, which is 40 per cent owned by TUI, Germany's leisure travel group, in partnership with three local private business groups, was expected to start operating in mid-2006. Its focus is on European leisure travellers.¹¹⁸

(c) Asia

173. The most spectacular growth of the LCC phenomenon in recent years has taken place in Asia, and particularly in South-East Asia and India. Table 17 provides an overview of selected Asian LCCs. As noted above, many analysts were sceptical whether the low-cost model would work in Asia because all successful precedents had operated only in domestic or quasi-domestic markets.¹¹⁹ The following obstacles had been mentioned in particular: the presence of international borders, which imply, on the one hand, the need to operate often under restrictive bilateral air transport agreements and, on the other, the impossibility of achieving quick turnarounds because of the delays involved in customs and immigration procedures; far greater travel distances, which are incompatible with a totally no-frills service; congested airports; and the fact that many international airlines in Asia are still majority government-owned, which could allow the incumbents to influence policy in their favour. However, despite a difficult start and LCCs currently only accounting for about 5 per cent of the market, momentum for liberalisation appears to be strengthening.

of regulatory impediments and the airline finally started operating out of Beirut in mid-2004 (Financial Times, 19 June 2004).

¹¹⁵ Airline Business, November 2006.

¹¹⁶ Airline Business, May 2007.

¹¹⁷ *Ibid.*; Aviation Week & Space Technology, 21 May 2007.

¹¹⁸ Airline Business, September 2004, May 2006; Aviation Week & Space Technology, 6 February 2006; Centre for Asia-Pacific Aviation, "Centreline", 10 January 2006; La Tribune, 2 December 2005.

¹¹⁹ Speech by Peter Harbison, Managing Director, Centre for Asia-Pacific Aviation, at the "Low Cost Airline Symposium", July 2004; Aviation Week & Space Technology, 16 August 2004.

Table 17
Selected low-cost carriers in Asia

Carrier	Base	Launch date	Main owner/Operator	Services	Competition
LCCs					
AirAsia	Kuala Lumpur	2001	Tune Air 73.4%; Islamic Development Bank Infrastructure fund; Crescent Venture Partners; Deucalion Capital (26%); Mofaz Air (0.6%)	13 domestic routes in Malaysia; first regional route Senai-Phuket Dec 2003	MAS, SIA, ValueAir, Lion Air, Thai
Air Deccan	Bangalore	Aug-03	wholly owned by Deccan Aviation Private Ltd	10 regional, Delhi, Mumbai	Indian Airlines, Air Sahara, Jet Airways
Air Do	Sapporo	Jul-98	Group of Hokkaido investors	4 domestic Japan	JAL
Cebu Pacific	Manila	1996	49% JG Summit Holdings; Gokongwei Group	Domestic Philippines, Hong Kong, Seoul	PAL, Asian Spirit, Air Philippines
Indonesia AirAsia	Jakarta	Dec-05	AirAsia (49%)	Domestic Indonesia, Kuala Lumpur	AirAsia, SIA, MAS/Garuda, ValueAir, Lion Air
Kingfisher Airline	Bangalore	May-05	United Beverages Group	More than a dozen domestic destinations	Indian Airlines, Air Sahara, Jet Airways, Air Deccan
Lion Air	Jakarta	Jun-00	Indonesia businessman Rusdi Kirana	50 Indonesia domestic; daily Jakarta-Singapore; Jakarta-Kuala Lumpur	SIA, ValueAir, AirAsia, Athena Air, Garuda
Oasis	Hong Kong	Feb-05	Property tycoon Raymond Lee and Allan Wong (of VTech Holdings)	London, Milan, Berlin, Cologne/Bonn	
One-Two-Go	Bangkok	Dec-03	Orient/Thai/Udom Tantiprasonchai	Domestic destinations	Thai, PB Air, AirAsia, Sky Asia
Skymark Airlines	Tokyo	Sep-98	Shinichi Nishikubo (Zero Inc) (35.8%); HIS travel (33%)	4 domestic Japan, charters to Korea	JAL, ANA
Skynet Asia Airways	Miyazaki	Aug-02	Investors in Miyasaki	3 domestic Japan	JAL, ANA
Thai AirAsia	Bangkok	Jan-04	AirAsia (49%), Asia Aviation, local investors	Domestic Thailand, Malaysia, Singapore, Macau, Cambodia, China, Viet Nam	Thai, Nok Air, One-Two-Go
Value Air/ Jetstar Asia	Singapore	Mid-2004 (ValueAir)	Qantas biggest single shareholder (49%)	Bangkok, Phuket, Kolkata, Bangalore, Hong Kong, Manila, Taipei and others	SIA, SilkAir, Thai, AirAsia, Lion Air, Athena Air
Viva Macau	Macau	Mid-2005	n/a	Regional routes, expanding to Middle East and Europe	
NATIONAL AIRLINE LCC VENTURES					
Air India: Air India Express	Thiruvananthapuram	May-04	100% Air India	Gulf destinations and South-East Asia	Emirates, Air Arabia, Thai AirAsia,
Air Macau: Macau Asia Express	Macau	Jan-06	Air Macau (51%), joint venture between China National Aviation Corporation and Hong Kong's Shun Tak Holds. (49%)	Asia and mainland China	
ANA: Air Next	Fukoka	Aug-04	ANA	5 domestic routes	JAL, Skynet Asia, The Fair Inc.
Garuda: Citilink	Jakarta	Aug-01	100% Garuda	24 domestic Indonesia	Qantas, Virgin Blue, Origin Pacific
JAL: JAL Express	Osaka	Jul-98	JAL	5 routes out of Osaka	ANA, Skynet Asia, The Fair Inc.
Singapore Airlines: Tiger Airways	Singapore	Mid-2004	SIA 49%; Temasek Holdings (11%); Indigo Partners LLC 24%; Irelandia Investments Ltd 16%	Regional ex-Singapore	ValueAir, Thai, Lion Air, ValueAir/Jetstar Asia
Thai Airways: Nok Air	Bangkok	Jul-04	Thai Airways, investors	Bangkok to domestic Thai destinations	AirAsia, SIA, ValuAir, PB Air, One-Two-Go

Source: Adapted from Centre for Asia Pacific Aviation, 2004.

174. At the turn of the millennium, the conditions were in place for introducing LCCs, including on international routes: strong economic growth in many countries; large populations reaching travel thresholds and increasingly urbanised, with a significant share dwelling in metropolitan areas of 500,000 inhabitants or more¹²⁰; growing accessibility to new distribution channels, and to the internet in particular; availability of large numbers of under-utilised regional airports, often operated by local governments eager to attract tourism; the increasing influence of tourism authorities on national aviation policy; forecasts of congestion at several major hubs making expansion of traffic through alternative point-to-point operations attractive; and increasingly liberal attitudes, making the opening up of air services to secondary points more acceptable.¹²¹

175. These conditions continue to generate pressure for liberalisation. Governments themselves have moved to support LCC development in the interest of economic growth particularly through tourism, alongside the restructuring of national legacy carriers. The latter, despite a lower cost base than their full-service equivalents in Europe and North America, are exhibiting more mixed productivity performance¹²² and are therefore vulnerable to highly efficient point-to-point low-cost operators.

176. Differently from the experience in the US or in Europe, and because of the strictly regulated environment, LCC services in Asia have been provided across borders mainly through the establishment of cross-border joint ventures. While the emergence of LCCs has taken place under, and been restricted by existing bilateral agreements, their success might lead to further regulatory change. A number of commentators opine that, as more and more trans-Asian low-cost airlines are created and mutual cross-border ownership spreads, their multi-country operations will evolve into quasi fifth-freedom services, leading to progressive relaxation of bilateral structures and to "back-door" liberalisation, particularly at secondary, regional airports.¹²³

(i) *Malaysia*

177. Perhaps the most-successful Asian LCC is Malaysia's AirAsia. The pioneer in Asia, it was launched in January 2002, and became profitable within a couple of years.¹²⁴ Air Asia is currently carrying about 3 million passengers. It has followed the Southwest LCC model very closely, even adding features such as letting customers book reservations with a mobile phone text message¹²⁵, and is claimed to be the world's lowest-cost carrier. The Malaysian Government has been supportive of the venture, in spite of the financial difficulties faced by the publicly-owned national carrier Malaysian Airline System (MAS), to the extent that it has decided to close most of the flag carrier's domestic network and for AirAsia to replace it on those routes. MAS is expected to keep serving primary local routes between state capitals and the tourist island of Langkawi, while AirAsia will operate secondary routes, in addition to competing with MAS on main routes. MAS had been reported as ascribing part of its mounting losses to the government requirement to operate an extensive domestic network, with only four out of 118 local routes being profitable. The Government is expected to continue subsidising routes to rural areas¹²⁶ in Borneo.¹²⁷

¹²⁰ There are more than 235 cities in Asia with populations of more than half-a-million, and 130 with more than 1 million. Besides, according to the Pacific Asia Travel Association, the propensity to fly increases exponentially when 50 per cent or more of the population dwells in urban areas. (Aviation Week & Space Technology, 16 August 2004.)

¹²¹ Centre for Asia Pacific Aviation (2003), "Low-Cost Airline Outlook".

¹²² Measured by revenue passengers per employee or aircraft utilisation.

¹²³ Interavia, no 675, January-February 2004; Aviation Week & Space Technology, 16 August 2004; Airlines Business, December 2003 and April 2004.

¹²⁴ It reported a net profit of US\$20 million within two years of operation (Aviation Week & Space Technology, 16 August 2004).

¹²⁵ Financial Times, 14 October 2003.

¹²⁶ The restrictive bilateral air services agreement between Malaysia and Singapore, last reviewed in 1980, is reportedly set to be revised following intense pressure from low-cost carriers from both sides. (Airlines Business, April 2007.)

178. Malaysia has also built a new low-cost terminal at Kuala Lumpur International Airport, which opened on 26 March 2006,¹²⁸ slightly ahead of Singapore's Changi Budget Terminal. The terminal is expected to generate significant additional savings for AirAsia from greater operating efficiency and lower rates (see document S/C/W/270, page 120, paragraphs 423-428, for a fuller discussion of low-cost terminals).

179. Besides the domestic market, AirAsia has pursued an active international service strategy, demonstrating that international services in Asia are possible for LCCs. Its success is also due to innovative business strategies. When the carrier was denied landing rights by the Civil Aviation Authority of Singapore (CAAS), it set up a second hub on the Singapore-Malaysian border town of Senai, where Singaporeans now account for about 40 per cent of the passengers carried. In addition to serving a number of international destinations in Thailand, Indonesia, Cambodia and Macau, China from the two Malaysian hubs, AirAsia has established another two bases, one in Thailand and one in Indonesia, through the establishment of joint ventures. Reportedly, it is also planning to start flights to mainland China, but has so far only launched a service to Xiamen from its Bangkok base.¹²⁹

180. More recently, AirAsia has announced plans to diversify into cargo, initially intending to operate from Bangkok to Singapore and Macau. Furthermore, in a shift from LCCs' traditional direct sales policy, it has tied-up with GDS provider Galileo International so as to make its fares and inventory available through 50,000 travel agencies, hoping to increase bookings by as much as 15 per cent in 2006.¹³⁰

(ii) *Singapore*

181. With no domestic market, LCCs in Singapore have had to compete for international traffic. Until 2003, the Singapore market had been the sole domain of the airlines in the state-controlled SIA Group. When ValueAir, a LCC set up by a group of Singaporean private investors, sought to launch low-cost operations in mid-2004, the Government set up a dedicated committee to allocate air traffic rights that had gone unused for a number of destinations to new entrants.¹³¹

182. ValueAir was quickly joined by Tiger Airways, a venture between Singapore Airlines and the founder of Ryanair, amongst others. Similarly to the strategy employed by AirAsia, Tiger is reportedly establishing bases elsewhere in the Asia-Pacific region to by-pass restrictive ownership and control restrictions. In 2006, the carrier concluded a franchise deal with Philippine operator Seair, under which the latter will lease aircraft from Tiger and operate services using the Tiger brand and distribution channels from Clark airport outside Manila to, initially, Singapore and Macau, China.¹³²

183. Jetstar Asia was launched by Qantas and a group of Singaporean investors in 2004. Only a year later, however, Jetstar Asia and ValueAir were facing financial difficulties, apparently due to problems with securing rights to serve additional destinations. They agreed to merge under a common Singaporean holding company, which has Qantas as its biggest single shareholder, with a stake estimated at around 45 per cent.¹³³

184. The LCC ventures have been seen as attempts by the Singapore Government to maintain the regional hub status of Changi Airport by attracting budget carriers. Lee Kuan Yew, modern Singapore's founding father, was reported as saying that Changi had a higher priority than SIA for the

¹²⁷ Airlines Business, March and May 2006; Week & Space Technology, 16 August 2004; Financial Times, 17 March 2006.

¹²⁸ See <http://www.klia.com.my/LCCTerminal>

¹²⁹ Financial Times, 28 April and 13 September 2004, 17 October 2005.

¹³⁰ Airline Business, March 2006; Centre for Asia Pacific Aviation, "Centerline", 5 January 2006.

¹³¹ Airline Business, November 2003; Financial Times, 4 July 2004.

¹³² Airline Business, June and November 2006 and June 2007.

¹³³ Aviation Week & Space Technology, 15 December 2003; Airline Business, February and October 2004, January, September and November 2005.

city-state's future development. A new dedicated low-cost terminal, Budget Carrier Terminal, was built at Changi to fend off competition from Malaysia's new Senai airport, AirAsia's second hub, and opened for operations in March 2006.¹³⁴

(iii) *Thailand*

185. In Thailand, new LCCs focused initially on the domestic market. The pioneer was One-Two-Go, owned by international airline Orient Thai Airlines. It had launched services at the end of 2003 to a few domestic destinations, and was rapidly followed, in 2004, by the arrival of Thai AirAsia and the launch of Nok Air, Thai Airways International's associated low-cost airline.¹³⁵ As an example of how the advent of LCCs can promote liberalisation in the air transport sector, following the onset of operation of budget carriers in late 2003, Thailand abolished the regulation that had set minimum air-fare rates in the domestic market.¹³⁶

186. Thai AirAsia was launched in 2004 as a joint venture between AirAsia and Shin Corp. AirAsia had management control and a 49 per cent stake in the new venture; Shin Corp. owned 50 per cent and a local businessman the remaining 1 per cent. Thai AirAsia was able to secure landing rights for a number of domestic destinations and make use of Thailand's unused rights to fly to Singapore and Macau.¹³⁷

187. In January 2006, the Singapore state investment company Temasek bought a 49.6 per cent controlling share in Shin Corp. The sale also included a 50 per cent stake in Thai AirAsia. Under Thai law, foreign equity participation in airlines is limited to 49 per cent, and the sale of Shin Corp. brought the share of equity in foreign hands to about 74 per cent. Thai regulators consequently informed Thai AirAsia that it needed to reduce the foreign shareholding to 49 per cent.¹³⁸ Following several transactions, the airline now confirms that it meets this requirement.¹³⁹

(iv) *Indonesia*

188. The pioneer LCC in Indonesia is Jakarta-based Lion Air, which was set up in 2000 and operates on 50 domestic routes. In December 2004, Awair started operating as a domestic LCC as an associate of AirAsia, which has a 49 per cent share in the airline. It later changed its name to Indonesia AirAsia, in line with the other AirAsia controlled airlines in the region. Its only international route is currently to Kuala Lumpur. It apparently attempted to serve Singapore early in 2005 but was denied landing rights. Responding to complaints by AirAsia, the CAAS justified its decision on the grounds that adequate documents had not been provided.¹⁴⁰

189. In May 2005, the Indonesian Directorate General of Air Communications (DGAC) announced plans to impose new regulations limiting LCCs from launching new services to Jakarta, Denpasar (Bali), Medan and Surabaya. According to the DGAC, the move was designed to help state-owned Garuda Indonesia, which was suffering from an uncompetitively high cost base and a significant fall in demand in the aftermath of the Bali bombings and the Asian tsunami. At the same time, the DGAC confirmed that foreign airlines were welcome to operate to other Indonesian cities and that LCCs with existing operations to the four major cities would be allowed to retain their services.¹⁴¹

¹³⁴ Aviation Week & Space Technology 16 August 2004; Financial Times, 7 April 2004; see http://www.changiairport.com.sg/changi/en/about_us/media.html

¹³⁵ Airline Business, January and May 2004; La Tribune, 23 February 2004.

¹³⁶ Aviation Week & Space Technology, 1 December 2003.

¹³⁷ Aviation Week & Space Technology, 1 December 2003 and 16 August 2004; Financial Times, 19 November 2003.

¹³⁸ Financial Times, 10 February 2006.

¹³⁹ Airline Business, April 2006.

¹⁴⁰ Financial Times, 20 January and 17 October 2005; Airline Business, May 2005.

¹⁴¹ Airline Business, May 2005 and Centre for Asia Pacific Aviation Centreline, 11 April 2005.

(v) *Japan*

190. Attempts to develop LCCs in Japan seem to have run up against a variety of constraints, including a congested airport infrastructure. One big obstacle is the essential role that Tokyo's Haneda airport plays as a national hub, coupled with the elevated landing fees at Narita International Airport, which are the highest in the world.¹⁴² The experience of Tokyo-based LCC Skymark is a case in point. Despite its early launch in 1998, subsequent to domestic deregulation in the Japanese market, it has only achieved a limited expansion and currently serves just four domestic destinations.

191. Unlike their counterparts in the US or Europe, Japanese cities have no secondary airports. Many analysts are of the view that independent LCCs could only be profitable if they cooperated with the national full-cost airlines, ANA and JAL. This was indeed the experience of Air Do, the pioneer independent budget airline in Japan. Founded in 1998, it had cut fares between Tokyo and Sapporo to half those of leading rivals. Legacy airlines soon reacted by lowering their fares and the carrier filed for court protection in 2002. Shortly thereafter, Air Do formed a comprehensive alliance with ANA and was able to record a profit for the first time in 2004. ANA also established a discount carrier, Air Next, in August 2004, which started operating a year later serving Fukuoka- and Okinawa-based domestic routes, previously operated by the ANA Group, in an effort to increase its competitiveness on the domestic network.¹⁴³ JAL had also launched its own wholly-owned subsidiary budget airline, JAL Express, in 1997, to operate domestic services from its hub at Osaka International Airport.

192. The international potential for expansion in short- to medium-haul operations from regional airports in Japan is considered significant. With high levels of economic activity and relatively limited international airline access, the regional Japanese tourist (and tourist destinations) would offer great potential if constraints on entry were loosened.¹⁴⁴

(vi) *India*

193. Despite a population of over 1 billion people, the fast pace of economic growth recorded in recent years and a rapidly expanding middle-class, India has one of the lowest rates of air travel per capita of any emerging country. One frequently-quoted statistic shows that more people travel by train each day than travel domestically by air in an entire year. This suggests a huge potential for LCCs to exploit, particularly in the context of a second wave of liberalisation in the air transport sector following a difficult initial experience in the 1990s.¹⁴⁵

194. India's low-cost scene was set by Air Deccan, a Bangalore-based carrier owned by India's largest operator, Deccan Aviation. The airline which started operating as a scheduled budget carrier in 2003 on secondary routes in the south and west of the country, targeting middle-class business travellers and local tourists who had, until then, travelled by rail.¹⁴⁶ Its success has led others to enter the market, to the extent that in 2005 14 new LCCs were reported as planning to commence operations in India. The most ambitious is Kingfisher, owned by the liquor company UB Group. The carrier commenced operations in May 2005. It markets itself differently from other new LCCs by offering some frills such as hot meals and personal televisions fitted at every seat. In June 2007, UB Group agreed to acquire 26 per cent of Air Deccan. The combined domestic market share of the two airlines is 32 per cent.¹⁴⁷

¹⁴² Interavia, January-February 2004; Aviation Week & Space Technology, 16 August 2004.

¹⁴³ Financial Times, 8 June 2004; http://www.ana.co.jp/eng/aboutana/press/index_sm.html; Aviation Week & Space Technology, 16 August 2004. ANA is reported as planning to launch separate low-cost domestic and international airlines by 2009, when Tokyo's Haneda airport is scheduled to open a new runway (Financial Times, 15 May 2006).

¹⁴⁴ Interavia, no 675, January-February 2004.

¹⁴⁵ Airline Business, May 2005.

¹⁴⁶ Aviation Week & Space Technology, 16 August 2004.

¹⁴⁷ Financial Times, 5 June 2007.

195. The establishment of Kingfisher was followed by Spicejet which, however, offers a true no-frills, low-fare product; Go Air; and, more recently, IndiGo.¹⁴⁸ These LCCs operate on domestic routes only. Expectations are that, low-cost carriers could control more than 50 per cent of the domestic market by the end of 2007, and their share could be as high as 70 per cent by 2010.¹⁴⁹

196. The only LCC which currently operates out of India on international routes is flag carrier Air India's low-cost arm, Air India Express. It started operating in May 2005, in all-economy class configurations but providing some frills, such as hot meals, and serves destinations in the Middle-East and South-East Asia. Commentators see Air India Express as an attempt to restore the position of its state-owned parent carrier as the country's dominant airline and move ahead of rival Asian airlines to secure the high-volume passenger routes connecting India to points like Singapore and Dubai. Air India Express faces competition from full-service carrier Emirates and LCCs like Air Arabia on routes to the Gulf. It does not compete directly with other Indian LCCs domestically, as it only operates on international routes. However, others seem to have similar intentions. Reportedly, Kingfisher had ambitions to operate on international routes and sought to acquire traditional airline Air Sahara to bypass Indian legislation that forces all carriers wishing to fly internationally to have first operated on the domestic market for at least five years.¹⁵⁰

197. Consolidation is expected to affect the low-cost sector in India. Between the LCCs preparing and those planning to launch services, as many as 20 LCCs could end up competing in the Indian market, more than the total operating in the whole of the Asia Pacific region. They will face a number of problems likely to constrain their expansion, namely severe shortages of skilled manpower, especially pilots; infrastructure limitations particularly at key airports; high taxes; and changes in the regulatory environment. As a result, over the medium-term, analysts foresee a wave of consolidation, resulting in three to four large LCCs operating on a national scale and five to six regional LCCs. They also speculate that India's policy that currently prevents foreign airline investment in domestic airlines¹⁵¹ might be eased to allow start-ups to benefit from partners with experience and expertise.¹⁵²

(vii) *China*

198. In 2005, investment regulations were finalised to encourage more private investment in the domestic airline sector, in a move aimed at progressively opening-up the market. Amongst the many start-ups licensed in 2005 were at least three carriers that intended to operate as LCCs, namely Tianjin-based Okay Airways, the first new airline in many years and the first without government ownership, Shanghai-based Spring Airlines and Chengdu-based United Eagle Airlines.¹⁵³ For some years before, the Civil Aviation Administration of China (CAAC) had actively promoted mergers in the local air transport market and overseen the consolidation of ten state-controlled airlines into three dominant groups, headed by Air China, China Eastern and China Southern.

199. However, airlines that tried to adopt the low-cost model reportedly encountered a number of regulatory difficulties. The ordering of fleets, the setting of fares, the selection of routes and the price of jet fuel are all regulated, implying that about 80 per cent of the costs in China are beyond an airline's control. These difficulties have apparently forced carriers that were trying to operate a low-cost model to drop or defer some of its aspects. For example, in October 2005, just 6 months after it

¹⁴⁸ Airline Business, February, May and December 2005; Aviation Week & Space Technology, 14 August 2006.

¹⁴⁹ Centre for Asia Pacific Aviation, "Centreline", 10 August 2006.

¹⁵⁰ Financial Times, 2 June 2004; La Tribune, 20 January 2006; Airline Business, July 2004, March and August 2006. Air Sahara was eventually acquired by Jet Airways (Airline Business, July 2007.)

¹⁵¹ Non-Indian businesses, which are not airlines, are allowed to own up to 49 per cent of Indian airlines.

¹⁵² Airline Business, May 2005; Centre for Asia Pacific Aviation, "Monthly Essential China", December 2005.

¹⁵³ Airline Business, July 2004; Centre for Asia Pacific Aviation, "Centreline", 11 April 2005.

was launched, Okay Airways said that it would adopt a more traditional airline business model, while Spring Airlines was forced to increase its lowest fare within days of its launch.¹⁵⁴

(viii) *Others*

200. The **Philippines** was one of the first Asian countries to actually witness the operation of a LCC. Cebu Pacific was launched in 1996 and is currently the second largest domestic carrier in the Philippines. It serves 16 domestic destinations, but launched international operations at the end of 2001 and now flies to Hong Kong, China and Korea. It has recently undertaken a major re-fleeting exercise and a massive promotional fare sale to supplant flag carrier Philippines Airlines as the country's leading domestic carrier.¹⁵⁵

201. **Macau, China** saw the creation of two LCCs in 2005-2006: Viva Macau, which operates on regional routes and is planning to expand to the Middle East and Europe, and Macau Asia Express, which is 51 per cent owned by flag-ship carrier Air Macau and will serve cities in Asia and mainland China. Since opening up its casino industry to foreign investment in 2004, Macau has seen an unprecedented growth in tourist arrivals. As most tourists arrive by ferry, however, there was room for more aviation services. Macau's airport, moreover, had been trying to position itself as a north Asian hub for LCCs and a cheaper entry point to Southern China by offering lower landing fees than neighbouring Hong Kong and Pearl River Delta. The regulatory situation also looked promising as Air Macau has exclusive traffic rights to 31 cities in mainland China, but is undercapitalised and operates to just nine. Similarly, Macau has concluded fairly liberal air services agreements with 42 other countries or territories, but operates only to five foreign destinations.¹⁵⁶

202. **Hong Kong, China's** LCC, Oasis Hong Kong Airlines, was created in February 2005 as a low-cost carrier that offers almost full cabin service on long-haul flights. It started operating in the autumn of 2006 to London and Vancouver, targeting budget leisure travellers who had not travelled before. Oasis intends to serve initially big, mature routes already flown by well-established rivals, but not necessarily operating to primary airports. In a second phase, the airline is looking to operate to secondary markets.¹⁵⁷

203. In the **Republic of Korea**, Korean Air recently announced that it is planning for a short- and medium-haul no-frills subsidiary operation to be launched over the next two to three years. It intends to serve routes within the Republic as well as to China, Japan and the Philippines. The low-cost airline will fly under its own brand, not that of the parent company.¹⁵⁸

204. A government-owned low-cost carrier is being prepared for launch in **Sri Lanka**. The carrier, which will be named Mihin Lanka, plans to start operating scheduled international services in 2007. It is targeting nationals leaving for overseas employment by offering lower-priced services to destinations in the Middle East and Asia. It will start by operating routes out of Colombo to Dubai in the United Arab Emirates and Trichi in India.¹⁵⁹

205. Pacific, **Viet Nam's** second state-owned carrier after Vietnam Airlines, completed its transformation into a low-cost carrier in the spring of 2007. Pacific serves domestic routes and destinations in Chinese Taipei. Pacific is reportedly in talks with Qantas about a possible re-branding

¹⁵⁴ Airline Business, September and December 2005; Centre for Asia Pacific Aviation, "Monthly Essential China", December 2005.

¹⁵⁵ Airline Business, April 2004; Centre for Asia Pacific Aviation, "Centreline", 10 May 2006; and <http://www.cebupacificair.com/aboutus/index.html>

¹⁵⁶ Financial Times, 25 January 2006; Centre for Asia Pacific Aviation, "Centreline", 1 September 2004; Aviation Week & Space Technology, 16 August 2004.

¹⁵⁷ Airline Business, March 2005; Financial Times, 13 February 2006; Aviation Week & Space Technology, 4 June 2007.

¹⁵⁸ Aviation Week & Space Technology, 11 June 2007; Airline Business, July 2007.

¹⁵⁹ Airline Business, February and April 2007.

as Jetstar, the low-cost subsidiary of the Australian legacy carrier.¹⁶⁰ In June 2007, Qantas was finalising the acquisition of a 30 per cent stake in the Vietnamese airline.¹⁶¹

(d) Oceania

206. Table 18 illustrates the situation with regard to selected low-cost carriers in Oceania.

207. The **Australian market** saw the entrance of the United Kingdom's Virgin group in mid-2000 with the launch of Virgin Blue, a Brisbane-based LCC. Its arrival precipitated a fierce price war, which eventually sparked the collapse of Ansett, Australia's other full-service carrier, and pushed the country's only other LCC, Impulse, into the Qantas organization in June 2001. Virgin Blue grew quickly to account for 27.3 per cent of the domestic market by the start of 2007.¹⁶² Departing to some extent from a pure LCC model, Virgin Blue offers flight connections and through fares, has route-specific alliance agreements with United Airlines, works with travel agents and Computer Reservation Systems vendors Galileo and Amadeus and has opened lounges at its major destinations. As it is restrained from marketing its name outside Australia, the airline operates under the Pacific Blue brand for its international routes to New Zealand and the South Pacific islands of Fiji, Rarotonga, Cook Islands and Vanuatu, and is further expected to service Samoa and Tonga.¹⁶³

208. Virgin Blue is currently reported as considering the establishment of an ultra-low-cost carrier, following the announcement by Singapore-based, "true" low-cost Tiger Airways that it will enter the Australian market late in 2007. Tiger Australia will have the same shareholders as the main Singapore-based carrier. It will thus be entirely foreign-owned, as allowed under Australia's liberal ownership regime, but its air operator's certificate will be Australian, and will also be entitled to fly to New Zealand.¹⁶⁴

209. It had been the arrival of Virgin Blue that had prompted Qantas to set up its own low-cost subsidiary, Jetstar, with the aim of serving lower-yielding domestic routes where full-service Qantas had difficulties making a profit. Melbourne-based Jetstar started operating in May 2004 and became profitable shortly after its launch.¹⁶⁵ At the start of 2007, the carrier accounted for 15.7 per cent of the domestic market.¹⁶⁶ In January 2006, Qantas decided to launch an international division for Jetstar, Jetstar International. The carrier serves international leisure routes of between six to ten hours of length between Australia and Thailand, Viet Nam, Indonesia, Honolulu in the United States, and since 2007, Japan and Malaysia¹⁶⁷, reportedly with costs 40-45 per cent lower than those of established airlines on long-haul services.¹⁶⁸

210. The move had surprised analysts, given that Qantas already had a low-cost international arm with Australian Airlines, which served mainly those Asian leisure routes where yields were too low for the parent carrier to operate profitably. Indeed, in July 2006, Qantas decided to discontinue the

¹⁶⁰ Airlines Business, March 2007.

¹⁶¹ Jetstar Chief Executive Officer's Address to the National Aviation Press Club, Sydney, 6 June 2007.

¹⁶² Airline Business, April 2007.

¹⁶³ Aviation Week & Space Technology, 15 December 2003, 12 July 2004; Airline Business, November 2005.

¹⁶⁴ Airline Business, March and April 2007; Aviation Week & Space Technology, 19 February 2007.

¹⁶⁵ The carrier was reported as looking at innovative ideas to attract more passengers, including testing internet auctions as a way to sell seats. In an initial trial, it used the eBay website to auction travel vouchers redeemable for tickets, and is studying techniques used by carriers elsewhere for last-minute auctions of empty seats (Airline Business, February 2005).

¹⁶⁶ Airline Business, April 2007.

¹⁶⁷ Routes to Japan and Malaysia are subject to final regulatory approval (Jetstar Chief Executive Officer's Address to the National Aviation Press Club, Sydney, 6 June 2007).

¹⁶⁸ Airline Business, January 2007; Aviation Week & Space Technology, 4 December 2006.

use of the Australian Airlines brand in favour of having Jetstar as its leisure carrier. Australian has continued to operate flights for Qantas under a wet leasing agreement.¹⁶⁹

211. On the international scene, competition is particularly intense on the two to three-hour trans-Tasman flights. The Single Aviation Market regime agreed by Australia and New Zealand makes it easy for their respective airlines to operate to and even within the other country, and the routes are a good length for discount carriers to operate on. In addition to Jetstar, which has taken over most of its parent carrier's trans-Tasman routes, they are served by Pacific Blue and Air New Zealand's Freedom Air. This has prompted full-service Qantas and Air New Zealand (ANZ), which had recorded losses on these routes (also because of competition from fifth-freedom carriers such as Emirates and Thai Airways) to revive talks about a code-share after their original alliance proposal was rejected by antitrust authorities.¹⁷⁰

Table 18
Selected low-cost carriers in Oceania

Carrier	Base	Launch date	Owner/Operator	Services	Competition
LCC					
Virgin Blue/ Pacific Blue	Brisbane	Aug-00	Patrick Corp (45%); Virgin Group (25%); executives (3.2%); institutions, retail investors (21.8%); employees (5%)	Australia, trans-Tasman, Pacific	Qantas, ANZ
NATIONAL AIRLINE LCC VENTURES					
Qantas: Jetstar	Melbourne	May-04	100% Qantas	Domestic leisure, trunk in Australia	Virgin Blue
Qantas: Jetstar International	Melbourne	Jan-06	100% Qantas	Leisure destinations in Asia and the Pacific	
ANZ: Express Class	Auckland	Nov-02	ANZ	Domestic regional New Zealand	Qantas, Virgin Blue, Origin Pacific
ANZ: Freedom Air	Hamilton	Nov-95	ANZ	Trans-Tasman, Pacific	Qantas, Virgin Blue, Air Pacific

Source: Adapted from Centre for Asia Pacific Aviation, 2004.

212. In **New Zealand**, Freedom Air was established in 1995 as a response to the commencement of discount services between Australia and New Zealand by the since-collapsed Kiwi Airlines. Freedom Air is wholly owned by ANZ and provides direct, non-stop services to the Australian cities of Brisbane, Gold Coast, Sydney, and Melbourne and to Fiji from its base in Hamilton, as well as from Auckland, Wellington, Christchurch, Dunedin and Palmerston North. Freedom Air briefly served on the New Zealand main trunk domestic routes, such as Auckland-Christchurch, but ceased these services to concentrate fully on providing value trans-Tasman flights.

213. In response, Virgin Blue of Australia had announced that it might enter the New Zealand domestic market, but has since abandoned the idea. This is attributed by observers mainly to the prospects of having to compete with The Express Class of ANZ, to inadequate access to Auckland International's domestic terminal and to the alternative route opportunities the airline has found in the Pacific islands.¹⁷¹ More recently, however, low-cost start-up Kiwijet announced that it intended to launch operations on domestic routes.¹⁷²

¹⁶⁹ Airline Business, January 2005, January, August 2006.

¹⁷⁰ Airline Business, November 2003, February 2004.

¹⁷¹ Airline Business, February and November 2005.

¹⁷² Airline Business, June 2007.

(e) Europe

214. The European low-cost phenomenon originated in the UK and Ireland. Both countries which had started liberalising their air transport markets before the European Commission commenced the EU-wide process with its three liberalisation packages between 1987 and 1997. Dublin-based Ryanair began operating as a LCC in 1991, initially concentrating on the UK-Ireland routes and starting to serve routes in continental Europe from its new London base in Stansted airport only after London Luton-based easyJet, and since-collapsed Debonair, commenced intra-European low-cost services in 1995 and 1996, respectively.¹⁷³

215. Apart from Virgin Express in Brussels, it is noticeable that most of the early low-cost development in Europe was in the British Isles. New airlines were attracted by the open regulatory environment, the vast London market, underused capacity at secondary airports and the possibility of negotiating reduced airport charges with newly privatised airports. Moreover, the low fares that these LCCs could offer from these island nations were very attractive compared to the cost (and travel time) of alternative surface transport modes.¹⁷⁴

216. By the end of the millennium, the impact of low-cost services in Europe was still very limited, accounting for only about 5 per cent of European traffic. The big growth took place in the following years, driven in particular by the rapid expansion of Ryanair and easyJet.¹⁷⁵ In 2005, LCCs in Europe accounted for over 25 per cent of traffic, with a share of 35 per cent in the UK, the most mature market.

217. In Germany, the low-cost airlines' share of total airline capacity on intra-European routes went from less than 3 per cent in summer 2002 to about 23 per cent in 2005, following the launch of several LCCs, such as Air Berlin, Hapag-Lloyd Express, DBA, Germania Express and Germanwings between 2002 and 2004. In Spain, low-cost start-up Vueling began flying in July 2004. The carrier is developing bases in both Barcelona and Madrid, and currently planning to set up its first overseas base in Paris. Spanair is another LCC which is expanding fast in the Spanish market, and both Ryanair and easyJet have set up bases in the country, in Barcelona-Gerona and Madrid, respectively.¹⁷⁶

218. Of the main European markets, France has seen the lowest penetration of low-cost airlines. LCCs (none of which are French companies) only have a share of 13.2 per cent of the domestic market. They account for 17 per cent of domestic capacity offered in 2006, against a 32 per cent share in Germany, 45 per cent in Italy, 49 per cent in Spain and 52 per cent in the UK for the same year.¹⁷⁷ Analysts point to the impact of the country's high-speed rail service, the TGV, Air France's dominance in the domestic market, the high costs associated with operating in the market, and the inbound nature of the French market as possible explanatory factors.¹⁷⁸ The Air France/KLM Group has recently launched Transavia.com, a short- and medium-haul low-cost carrier that plans to serve destinations in Portugal, Spain, Italy, Morocco, Tunisia and Egypt from its base at Paris Orly airport. The decision to launch the LCC was motivated, according to some commentators, by the Air France's desire to protect its position at Orly. By having Transavia.com take over the slots that Air France will

¹⁷³ Doganis, R. (2006) "The Airline Business".

¹⁷⁴ Francis, G. et al (2006), "Where next for low-cost airlines? A spatial and temporal comparative study", in *Journal of Transport Geography*, vol. 14, 83-94.

¹⁷⁵ In 2006 Ryanair tried to take over newly-privatised Irish flag carrier Aer Lingus, but in June 2007 the European Commission blocked the proposed bid because of competition concerns. The two airlines control more than 80 per cent of European flights in and out of Dublin airport. (*Airline Business*, February 2007; *Financial Times*, 27 June 2007.)

¹⁷⁶ *Airline Business*, November 2006 and February 2007; *Financial Times*, 28 August 2006; *Interavia*, no. 688, summer 2007.

¹⁷⁷ *Les Echos*, 29 November 2006; *Interavia*, no. 688, summer 2007.

¹⁷⁸ *Airline Business*, July 2007.

have to relinquish at the Paris airport in the summer of 2007, the legacy carrier will be able to fend off the increasing competitive threat posed by easyJet, which has a base at Orly.¹⁷⁹

219. Table 19 provides a breakdown of the European market.

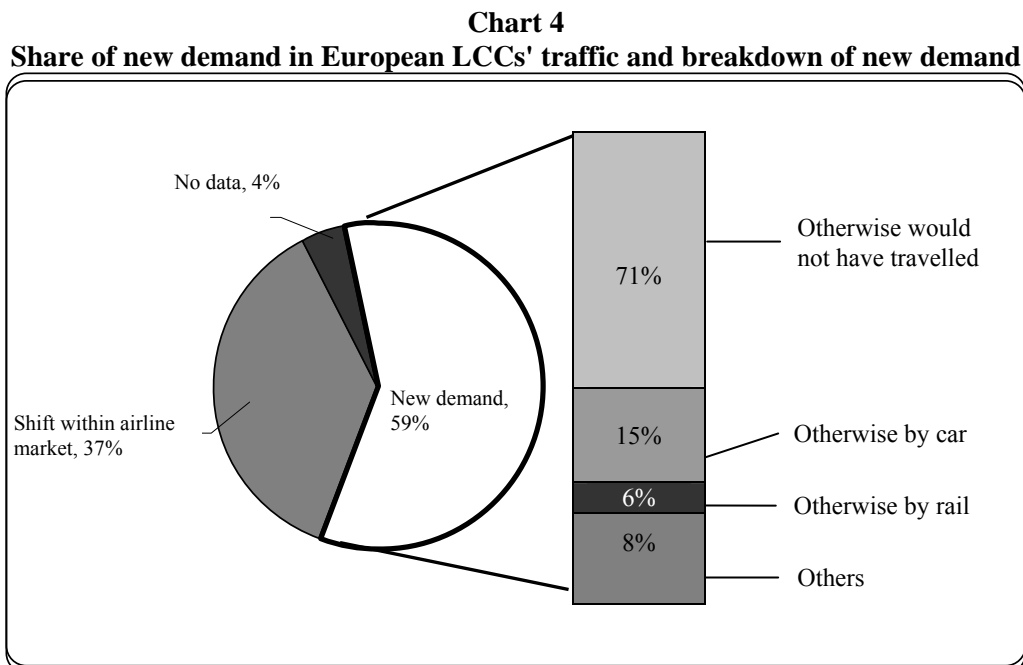
Table 19
Share of the top 5 legacy and low-cost carriers in the Western European market, May 2005
(Percentage of total seat capacity)

Top 5 legacy carriers		Share	Top 5 low-cost carriers		Share
1	Lufthansa	6.4%	1	Ryanair	7.2%
2	Iberia	6.3%	2	easyJet	5.6%
3	Air France	6.2%	3	Air Berlin	4.3%
4	British Airways	6.1%	4	Sterling	0.9%
5	SAS Scandinavian	4.8%	5	Germanwings	0.9%

Notes: Based on capacity data from OAG schedules for May 2005.

Source: Airline Business, May 2005.

220. The rate at which LCCs have increased their market share in Europe has been remarkable, especially in light of the fact that the sector was fully liberalised only in 1997.¹⁸⁰ Some analysts predict that, by 2010, LCCs will account for at least one-third of the market.¹⁸¹ This growth has not all been at the expense of the legacy carriers, but, according to the European Low-Fare Airlines Association (ELFAA), was mostly supported by entirely new demand, stimulated by the offering of very low fares and the opening of new routes. Chart 4 illustrates the situation.



Source: European Low Fares Airlines Association, 2004.

¹⁷⁹ La Tribune, 28 November 2006; Les Echos, 13 March 2007.

¹⁸⁰ In 1997, as part of the third package of liberalisation measures, all carriers holding a community license were given the right of cabotage, i.e. the right to operate domestic routes within the whole EU. (see compilation, pages 178-79).

¹⁸¹ Airline Business, May 2005.

221. Traditional carriers responded to the LCC challenge by creating their own low-cost subsidiaries. In 1998, British Airways set up Stansted-based Go, and was quickly followed by KLM, whose low-cost carrier, Buzz, was also operating out of Stansted. By 2002, a degree of consolidation had already taken place in the UK market, with Go being taken over by easyJet and Buzz by Ryanair. As the LCC competition spread to mainland Europe, with easyJet and Ryanair opening operating bases in Germany, Switzerland and Italy, and the launch of many new low-cost start-ups on the continent¹⁸², other legacy airlines were induced to establish their own low-cost subsidiaries. In 2002, British Midland set up bmibaby, to serve all its European routes from East Midland airport. A year later, SAS launched Snowflake, to serve European cities and a few other leisure destinations around the Mediterranean¹⁸³, and in Germany, Lufthansa reworked its Germanwings subsidiary into a low-cost airline. More recently, Iberia launched, in partnership with other Spanish investors, a Barcelona-based LCC, Clickair, which started operating in October 2006.¹⁸⁴ Iberia itself is expected to concentrate on its Madrid hub and keep serving European destinations which are important feeder routes for its profitable long-haul flights to Latin America and the US.¹⁸⁵

222. Network carriers have attempted to counter the competitive threat of LCCs by progressively withdrawing from given routes and reducing costs and fares to certain destinations. For example, British Airways has cut its workforce costs, started offering internet sales, reduced a number of its intra-European fares by up to 50 per cent and introduced greater flexibility in its fares, for instance by removing the requirement for Saturday-night stay. Air France, Aer Lingus, British Midland, SAS Scandinavian and Alitalia have all pursued similar strategies.¹⁸⁶

223. In preparation for the enlargement of the EU to 25 Member States, in 2002 the Czech and Slovak governments both liberalised their bilateral agreements allowing low-cost services to the UK. Whereas services to Prague were initially provided by UK airlines, a new LCC, SkyEurope, was set up in Bratislava in 2002. SkyEurope, Eastern Europe's first LCC, has grown rapidly and has become the *de facto* national carrier of Slovakia.¹⁸⁷ The airline has since set up bases in Budapest, Krakow and Warsaw, offering flights to destinations throughout Western Europe. Following SkyEurope's example, LCCs have proliferated throughout Eastern Europe, with carriers such as Smart Wings in Prague and Wizz Air in Budapest. The latter, in particular, has proven very successful and has become, in the space of three years, the most important LCC in Eastern Europe. It is expected to transport about 3 million passengers in 2006, nearly as many as the national airline Malev, while employing only about 400 people, substantially less than the 3500 employed by the legacy carrier. The availability of runway capacity in Eastern Europe and fares that are attractive for Western European tourists suggest that the potential for growth has not yet been fully exploited.¹⁸⁸

224. The LCC market in Europe has, however, also exhibited fragility and instability in recent years. The major surge in new capacity, with many new entrants over the 2002 to 2004 period and others being set up as subsidiaries of conventional scheduled carriers, has resulted in overcapacity. As LCCs have begun to compete head-to-head on a number of routes and faced increased pressure from the legacy carriers' new pricing policies, yields have started to decline. The UK was the first market to undergo a wave of consolidation, in 2002, while in 2004 a number of carriers suspended operations across the continent, including Italy's Volare, Poland's Air Polonia and Germany's V-Bird.

¹⁸² Mercer Management Consulting estimates that, in the summer of 2004, there were 54 LCCs operating in Europe, compared with just 12 in 2000. (Airline Business, May 2005.)

¹⁸³ La Tribune, 14 April 2003.

¹⁸⁴ Airline Business, November 2006.

¹⁸⁵ Financial Times, 27 April 2006.

¹⁸⁶ Airline Business, May 2002; Les Echos, March 2002; Francis et al (2006).

¹⁸⁷ It carried nearly 1 million passengers in 2004, up four-fold on 2003, while maintaining a 75 per cent load factor.

¹⁸⁸ Francis et al (2006); La Tribune, 28 May 2004; Les Echos, 21-22 April 2006; Airline Business, March 2005.

225. Restructuring and consolidation are expected to continue, in particular in the crowded German low-cost market. In 2005, DBA and Germania Express merged, and a year later DBA was taken over by Air Berlin, which had acquired a stronger domestic presence with 17.7 per cent of the market, behind legacy carrier Lufthansa.¹⁸⁹ In 2007, the carrier agreed to acquire German leisure carrier LTU. The deal gives Air Berlin a long-haul network for the first time.¹⁹⁰ Air Berlin has thus further consolidated its position as Europe's third largest LCC, while the market is still dominated by easyJet and Ryanair. In 2005, the latter carried 25 million passengers each, compared with Air Berlin's 12 million and Virgin Express's 2 million. Some analysts predict that the European LCC market will end up with three or four actors, most likely including easyJet and Ryanair, thanks mainly to their first-mover advantage and consistent low-cost model.¹⁹¹

226. One important source of cost advantage for LCCs vis-à-vis legacy carriers may slowly start to erode. The significant savings in airport charges from which a number of European LCCs profited in the period up to 2000 may start to unravel, as many key contracts between the older established low-cost operators and airports are up for renegotiation in the period 2005 to 2010. Nevertheless, where secondary airports with minimal schedules have been used, airport charging arrangements should still be relatively easy to renew on favourable terms. In this regard, Ryanair is particularly well-placed, also because many of its airport contracts had been concluded for 15 years or longer. On the other hand, airport deals which included incentives for the airline to develop new markets might prove more problematic.¹⁹²

227. In one of the most significant regulatory developments affecting LCCs, early in 2004 the European Commission declared that part of the subsidy paid by Charleroi airport and the local regional Belgian Government to encourage Ryanair to establish a base in Charleroi was illegal State aid.¹⁹³ Following the Ryanair/Charleroi Decision, in December 2005 the Commission issued new guidelines setting out a legal framework for the financing of airports and for State start-up aid used by regional airports for the benefit of airlines (see document S/C/W/270, page 118, paragraphs 419-21, for a more detailed discussion).¹⁹⁴

228. The support extended to Ryanair at some other airports has also been successfully challenged in the courts. These include Strasbourg airport, where the €1.4 million financial aid paid by the local Chamber of Commerce and Industry to the carrier was declared illegal, and Skavsta airport in Sweden. In October 2004, moreover, Iberia accused Ryanair of having received incentives worth €6.2 million and €3.6 million from the regional governments to launch services from Gerona and Santander, respectively. In Germany, Air Berlin in January 2005 lodged a complaint against Lubeck airport over an alleged unfair support payment of €10 million to Ryanair; in September 2006, a German court ruled in favour of Air Berlin.¹⁹⁵

229. A second regulatory development impacting on LCCs were the 2002 "open skies" judgments of the European Court of Justice.¹⁹⁶ As a result of this series of parallel cases, the Commission started developing a European external aviation policy and launched targeted negotiations with a number of countries to conclude "horizontal agreements" to replace existing "substantial ownership and effective control" designation clauses with a "Community carrier" designation clause. One such countries is Morocco, with whom the Commission signed an open skies

¹⁸⁹ Airline Business, September 2006.

¹⁹⁰ Airline Business, May 2007.

¹⁹¹ Airline Business, May 2005; La Tribune, November 2004.

¹⁹² See Doganis, R. (2006).

¹⁹³ Commission Decision 2004/393/EC of 12 February 2004.

¹⁹⁴ Commission Communication of 9 December 2005 "Community guidelines on financing of airports and start-up aid to airlines departing from regional airports", Official Journal C 312.

¹⁹⁵ Airline Business, September 2006.

¹⁹⁶ 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.

agreement which entered into force in March 2006.¹⁹⁷ EasyJet and Ryanair reportedly took immediate advantage of the opportunities offered by the agreement and have launched services to Marrakech, Fes and Oujda. Whereas easyJet will be flying out of London, Ryanair will take full advantage of the fact that the new horizontal agreement effectively opens up routes between the European Union and Morocco to any EU carrier by serving the country out of Frankfurt and Marseilles.¹⁹⁸

3. The spread of the low-cost model – catalysts and implications

230. Liberalisation in the air transport sector has been a key catalyst for their development of the low-cost model. Table 20 juxtaposes the timing of the market penetration of LCCs with the timing of the main elements of liberalisation in main geographical regions, which are listed in the order in which low-cost operations began.

Table 20
Low-cost carriers' market penetration

Region (country)	Year low-cost operations began	Year(s) in which market liberalisation took place	Share of overall market (%)
North America			
USA	1978	1978	24 - 25 ^a
Canada	1996 ^b	1996	30
Europe			
UK/Ireland	1995	1993	40
EU	1999	1995	20
EU (25)	2002	2004	<1
Australia/New Zealand			
Australia	1990	1990	30+ ^c
New Zealand	1996	1984	...
Asia			
Malaysia	2001	2001	2
Singapore	2001	2001	<1
Japan	1998	1998 ^d	1 ^e
China ^f	–	Ongoing	–
Thailand	2004	2003	<1
India		2003 ^g	<1
Rest of world			
Brazil	2001 ^h	1998	3
S. Africa	2001 ⁱ	1999	1
Gulf States	2004	2003	<1

Notes: ^a "Not a real stretch for low-cost US market to expand from 20-25 per cent to 50 per cent in the next 20 years", see de Neufville, R. (2004), Current Design Challenges for Airports Worldwide, Transportation Research Board Annual Meeting, 11-15 January.

^b WestJet, see Lawton, T.C. (2002), Cleared for Take-Off: Structure and Strategy in Low Fare Airline Business, Ashgate, Aldershot.

^c "Virgin Blue has 30% of the Australia market and Qantas has responded with a new low-cost carrier in order to protect its market share", see Airliner World (2003, vol. 12(12). p.23). It is hard to calculate the market share in New Zealand which is dominated by ANZ subsidiaries, many of which have remodelled themselves with elements of the low-cost model.

^d Thomas, G. (2002), Asia's Absent Revolution, Air Transport World (September), 42-47.

^e Thomas (2002), *op. cit.*

^f Lawton (2002), *op. cit.*, p.181, says China has begun to remove restrictions

^g Air Deccan.

^h Gol, see Lawton (2002), *op. cit.*, p.184.

ⁱ Kulula.com, see Lawton (2002), *op. cit.*, p.184.

Source: Francis, G. *et al.* (2006).

¹⁹⁷ The Moroccan authorities reportedly have the target of 10 million foreign tourists annually by 2010, nearly double the 2005 figure of 5.84 million

¹⁹⁸ Marseille is the first Ryanair base in France. (La Tribune, 2 December 2005, 2 and 11 May 2006).

231. Whereas liberalised domestic or quasi-domestic markets may be viewed as a necessary condition for the development of LCCs, in and by themselves they have not proven sufficient. Countries such as New Zealand experienced early liberalisation but relatively little low-cost growth until 2004, whereas in mainland Europe low-cost activity accelerated at least four years after full liberalisation. On the other hand, in countries such as Malaysia, Thailand or Morocco, liberalisation appears to have been driven by the respective governments' attempts at creating favourable market conditions for low-cost services, with the ultimate aim of stimulating economic growth through lower-priced air travel and increased tourist arrivals.

232. Other factors that seem to have contributed to the spread of the low-cost model include: densely populated areas combined with expanding middle-classes represented latent demand for air transport services that LCCs have been able to exploit; the availability of cheap and underutilised airport capacity at secondary or un-congested airports helped low-cost airlines to achieve the fast turnarounds at the core of their business model; the spread in the use of the internet allowed for reductions in distribution costs and greater price transparency; and the role played by innovative and far-sighted entrepreneurs in launching low-cost operations in new market and exploiting first-mover advantages.¹⁹⁹

233. The low-cost model, has not been universally successful, however. In some instances, carriers, especially the low-cost subsidiaries of the legacy carriers, have adopted inappropriate business models inconsistent with the low-cost philosophy; in others, LCCs have been unable to secure adequate financial backing to build up an essential critical mass and sufficiently expanded networks; in yet others, they have faced the strong competitive reaction of incumbent legacy carriers, which improved efficiency, cut fares and relied on the advantage granted by their extended networks; in others still, regulatory barriers severely affected LCCs' ability to fully exploit their potential.

234. As several low-cost markets mature, LCCs are bound to be confronted with new challenges. They will increasingly find themselves in direct competition with other LCCs, rather than with the traditional airlines over which they enjoy significant cost advantages. They will thus be forced to look at new routes as sources of growth, and these will most likely be thinner routes on which different aircraft would need to be employed and which are generally less profitable. They will also face greater difficulties in controlling costs as advantageous airport deals come up for renegotiation; increasingly mixed fleets imply higher maintenance, training and financing costs; the strive to differentiate products from other LCCs results in additional frills being offered; and employees demands renegotiation of their contracts.

235. Nevertheless, the low-cost model appears to be sustainable, even in mature markets as demonstrated by the hugely successful 30-year experience of Southwest in the US. LCCs have the potential to stimulate tourism and, more generally, economic activity in the local communities they serve. These benefits are not necessarily confined to the locality of the airports to which they fly, as passengers often travel onwards by ground transportation. Secondary airports have been faced with both opportunities and challenges by the operation of LCCs: increased passenger numbers have had to be weighed against lower aeronautical charges, and the ability to generate sufficient non-aeronautical revenue has proven a critical determinant of profitability. Passengers have benefited from the operation of LCCs in terms of significantly lower fares and shorter travel times as compared to the similarly priced alternative means of transport traditionally available. However, they might also be negatively affected in terms of available destinations and absence of the seamless connections that traditional hub-and-spoke carriers would have provided. As for the environmental implications of LCCs, while their newer, more fuel-efficient and better used aircraft are positive factors, these need to be weighed against the growth in demand and increasing substitution of air for other forms of transport.

¹⁹⁹ Francis, G. et al (2006).

PART B

NON-SCHEDULED PASSENGER AIR TRANSPORT SERVICES

B. NON-SCHEDULED PASSENGER AIR TRANSPORT SERVICES

1. Economic developments

236. Over the past five years, the non-scheduled/charter passenger market (for a definition and main characteristics, see compilation, page 266) has suffered from the competitive challenge posed by low-cost carriers. This was the case particularly in Europe, where the non-scheduled industry is most significant.²⁰⁰

237. Table 21 illustrates the evolution of non-scheduled traffic over the period under review. The steady decline in the share of total traffic accounted for by non-scheduled traffic is particularly noteworthy.

Table 21
Estimated international non-scheduled revenue passenger traffic, 2000-2005

Category	Millions of passenger-kilometres performed					
	2000	2001	2002	2003	2004	2005
Non-scheduled traffic	265 460	272 790	244 930	240 720	266 590	261 500
Annual change (%)	11.4	2.8	-10.2	-1.7	10.7	-1.9
Scheduled traffic	1 778 110	1 715 740	1 734 130	1 738 510	2 015 070	2 197 360
Annual change (%)	9.6	-3.5	1.1	0.3	15.9	9.0
Total traffic	2 043 570	1 988 530	1 979 060	1 979 230	2 281 660	2 458 860
Annual change (%)	9.8	-2.7	-0.5	0.0	15.3	7.8
Non-scheduled traffic as percentage of total	13%	13.7%	12.4%	12.2%	11.7%	10.6%

Note: Non-scheduled traffic covers the non-scheduled traffic of scheduled airlines and non-scheduled operators.

Source: ICAO Annual Report of the Council, 2000-2005.

238. European charters were in many respects the first cost-cutting airlines on the continent, pioneering the fast turnaround times and no-frills, high-density services now commonplace with LCCs. The independent charter airlines had originally developed by providing capacity for tour operators selling all-inclusive holidays on routes to the Mediterranean from the United Kingdom, Germany and Scandinavia.

239. In terms of cost-differentials, non-scheduled airlines enjoy a number of advantages vis-à-vis LCCs: they use larger, more economical aircraft and, by operating also during the night, fly them for longer hours; they do not need to maintain high frequencies through the day or through the year; and they have minimal selling and advertising expenditure as their capacity is sold mainly to a few, large tour operators, which may even be part of the same conglomerate. However, non-scheduled operators also face a number of cost-disadvantages, as they do provide some in-flight catering and are unlikely to benefit from the same low airport charges that the LCCs have been able to negotiate at some airports.²⁰¹

240. While the seat-kilometre costs and fares of charters might be lower than those of LCCs, the two do not provide completely comparable services. Low-cost airlines offer much greater flexibility of departure dates and times, more socially acceptable schedules, much higher frequencies and, more generally, the possibility of tailor-making holidays thanks to the choice and transparency offered by the internet.

²⁰⁰ Non-scheduled traffic in Europe has consistently been the largest regional component of the world charter market throughout the period under review (Annual Review of Civil Aviation 2000-2005, ICAO Journal, Number 6, 2001-2006).

²⁰¹ Doganis, R. (2006), *The Airline Business*, Second Edition, Routledge, London.

241. These features of LCCs are particularly well-suited to the shift in consumers' tastes and expectations, away from the traditional one or two-week package holidays towards independent and tailored ones. This shift coincided with growing affluence in major European markets and the ready accessibility of direct booking options offered by the internet. By way of example, 90 million European took a package holiday of four nights or more in 2003, down 10 per cent from the 100 million of 2000.²⁰² Before the major expansion of LCCs in the late 1990s, intra-European passenger charters were accounting for as much as one third of the total airlines market, with peaks of up to 90 per cent on some major holiday routes to the Mediterranean. Between 2002 and 2004, however, intra-European non-scheduled traffic was either static or declined, as it did out of Germany, whereas low-cost traffic was booming.²⁰³ Non-scheduled carriers have been completely driven out of some upmarket destinations, such as Nice, by the successful operation of LCCs on those routes.²⁰⁴

242. Particularly hard-hit have been the independent charter carriers. They have found themselves squeezed in the middle. On the one hand, the low-cost airlines were expanding rapidly, and, on the other, the major travel groups have developed sizeable, vertically integrated charter operations of their own. One example of the plight of independent carriers is Aero Lloyd, the German charter airline which collapsed in 2003.

243. More recently, the sector has experienced a wave of consolidation, with the planned merger of Thomas Cook and MyTravel, respectively the second and third largest operators, and of the TUI Group and First Choice, the first and fourth largest groups, which will together create the biggest European charter operator. Both mergers were granted regulatory approval by the European Commission within a month of each other in the spring of 2007. Analysts expect consolidation to continue, driven by the pressure exerted on charters' traditional business models by the flexibilities offered by the internet.²⁰⁵

244. As Table 22 shows, the sector is still heavily dominated by European vertically integrated travel groups: the TUI Group, Thomas Cook Airline Group and MyTravel Airways are the three largest operators. They all operate a number of different airlines under a single airline management.

²⁰² Airline Business, June 2004.

²⁰³ Doganis, R. (2006), *The Airline Business*, Second Edition, Routledge, London.

²⁰⁴ According to estimates by Mercer management consultants, Europe's tour operators, which were growing at a rate of 6 per cent a year in the late 1990s, are now expected to reach a maximum annual growth rate of 3 per cent until end of the decade (Airline Business, September 2004).

²⁰⁵ Airline Business, March and July 2007.

Table 22
Airlines ranked by charter passenger numbers, 2001 and 2005

Rank 2001	Airline operation	Country	Pax numbers	Rank 2005	Airline operation	Country	Pax numbers
1	TUI	Europe	18,884	1	TUI Group	Europe	19,930
2	Thomas Cook	Europe	15,354	2	Thomas Cook Airline Group	Europe	14,978
3	MyTravel Airways	United Kingdom	7,154	3	MyTravel Airways	Europe	6,433
4	Air 2000	United Kingdom	7,029	4	First Choice Airways	United Kingdom	6,000
5	LTU	Germany	6,239	5	Air Berlin	Germany	5,940
6	Air Berlin	Germany	4,558	6	LTU International Airways	Germany	5,600
7	Monarch Airlines	United Kingdom	4,092	7	Transavia Airlines	Netherlands	4,770
8	Jet Airways	India	4,008	8	Monarch Airlines	United Kingdom	2,800
9	Aero Lloyd	Germany	3,500	9	Excel Airways	United Kingdom	2,591
10	Air Transat	Canada	3,330	10	Air Transat	Canada	2,510
11	Volare Group	Italy	2,874	11	Futura International Airways	Spain	2,470
12	MyTravel Airways A/S	Denmark	2,850	12	Spanair	Spain	2,340
13	Spanair	Spain	2,339	13	Martinair	Netherlands	1,888
14	Futura	Spain	2,112	14	Austrian Airlines	Austria	1,800
15	Transavia	Netherlands	2,069	15	Tunisair	Tunisia	1,780
16	Martinair	Netherlands	1,801	16	TAM	Brazil	1,570
17	Tunisair	Tunisia	1,636	17	Finnair	Finland	1,390
18	Champion Air	United States	1,469	18	Atlasjet Airlines	Turkey	1,280
19	Eurowings	Germany	1,432	19	Ryan International Airlines	United States	1,187
20	Finnair	Finland	1,414	20	Iberworld Airlines	Spain	1,070
21	Excel Airways	United Kingdom	1,300	21	Saudi Arabian Airlines	Saudi Arabia	970
22	TAM Linhas Aereas	Brazil	1,171	=	Air Europa	Spain	970
23	Iberworld	Spain	1,077	23	Livingston	Italy	968
24	Ryan International	United States	1,027	24	Champion Air	United States	950
25	Iran Air	Iran	940	25	Korean Air	Rep. of Korea	940
26	Arkia Israeli Airlines	Israel	910	26	World Airways	United States	920
27	Maersk Air	Denmark	846	27	Travel Service	Czech Rep.	912
28	Swiss	Switzerland	830	28	China Southern	China	877
29	Star Airlines	France	805	29	LTE	Spain	875
30	China Yunnan Airlines	China	656	30	KrasAir	Russian Fed.	810
31	China Southern	China	643	31	Astraeus	United Kingdom	800
32	SkyWest Airlines	United States	581	32	Asiana	Rep. of Korea	763
33	World Airways	United States	547	33	Iran Air	Iran	760
34	Saudi Arabian Airlines	Saudi Arabia	534	34	CSA Czech Airlines	Czech Rep.	710
35	Austrian Airlines	Austria	528	35	Star Airlines	France	700
36	EgyptAir	Egypt	506	36	Sibir Airlines	Russian Fed.	690
37	British Airways	United Kingdom	484	37	Blue Panorama Airlines	Italy	670
38	PGA - Portugalia	Portugal	450	38	Transaero	Russian Fed.	645
39	Air Algerie	Algeria	437	39	Hamburg International	Germany	630
40	LOT Polish Airlines	Poland	415	40	Hainan Airlines	China	580
41	Siberia Airlines	Russian Fed.	409	41	Air Atlanta Europe	United Kingdom	553
42	THY Turkish Airlines	Turkey	372	42	THY Turkish Airlines	Turkey	500
43	Hawaiian Airlines	United States	367	43	Edelweiss Air	Switzerland	490
44	Hamburg International	Germany	327	44	Pulkovo Aviation Enterprise	Russian Fed.	470
45	Iran Aseman	Iran	325	45	SAS Sverige	Sweden	459
46	AZZURAir	Italy	324	46	Air Adriatic	Croatia	440
47	CSA Czech Airlines	Czech Rep.	317	=	EgyptAir	Egypt	440
48	Hainan Airlines	China	314	48	SAS Braathens	Norway	423
49	Lauda Air SpA	Italy	276	49	China Airlines	China	420
50	Aeroflot	Russian Fed.	266	50	Swiss	Switzerland	410

Notes: Pax = Passengers.

2001 - This ranking complements the Airlines Business World Airlines Ranking for mainline passenger carriers (published September 2002), and is based on the returns to that survey. Additional information

comes from US DOT Form 41 data and IATA's World Airline Statistics. Figures for charter carriers include all passenger traffic, while figures for scheduled carriers include only the charter element for their passenger traffic. RPK=Revenue Passenger-Kilometres, ASK=Available Seat-Kilometres.

2005 - This ranking complements the Airlines Business World Airlines Ranking for mainline passenger carriers (published August 2006), and is based on the returns to that survey. Additional information comes from US DOT Form 41 and the UK Civil Aviation Authority. Figures for charter carriers include all passenger traffic, while figures for scheduled carriers include only the charter element for their passenger traffic. Airlines operating on behalf of other carriers are also included. RPK=Revenue Passenger-Kilometres, ASK=Available Seat-Kilometres. TUI, Thomas Cook and MyTravel, Europe's three largest travel groups, operate a number of different airlines under a single airline management.

Source: Airline Business, October 2002 and September 2006.

245. Non-scheduled airlines have started responding to the threat posed by low-cost operators.

246. First, they have tried to add more flexibility into their business model by further expanding the practice of selling off spare capacity on a seat-only basis.²⁰⁶ They have also continued to contract their excess winter capacity out to other parts of the world, i.e. mainly to North America for Caribbean routes and to the Islamic world for the traffic linked to the Hadj.²⁰⁷

247. Second, a number have set up their own low-cost subsidiaries or transformed into LCCs. For example, the TUI group, the world's largest leisure travel conglomerate, teamed up with Germania to launch Hapag-Lloyd Express²⁰⁸ in Germany and Thomsonfly in the United Kingdom; MyTravel set up MyTravel Lite out of Birmingham; Thomas Cook re-launched Condor; and Air Berlin, Europe's largest independent charter operator, started its own low-cost operation.²⁰⁹

248. Third, vertically integrated operators have moved towards "dynamic packaging"²¹⁰, by unbundling their traditional package holiday so as to offer travellers greater flexibility in choosing their flights and accommodation while at the same time offering them the convenience of pre-booking hotels, cruises, transfers and car rentals. In terms of distribution channels, they rely on the internet²¹¹ as well as their own town centre travel shops.

249. Along with the wider upturn in the airline industry, these changes have helped the sector recover somewhat in 2004, after being battered also by the economic downturn of 2001-2003 and the fallout from the SARS epidemic. Their battle for the intra-European market of flights of less than 3 hours, however, seems to have been permanently lost to LCCs (and legacy carriers), which have the frequency advantage.

250. Non-scheduled operators still see scope for growth on medium- to long-haul leisure routes. On the medium-haul routes of over 3 hours to the Mediterranean basin, LCCs are unable to compete effectively, as they struggle to fit in the benchmark of three daily rotations and cannot maintain sufficient frequency as the routes are often either too thin or too seasonal. Examples of such routes are many Greek islands, Turkey and Egypt, but also Morocco and Tunisia, where non-scheduled European airlines also face the competition from the charter operations of the domestic legacy airlines' Royal Air Maroc and Tunis Air, respectively, as well as from the local non-scheduled operators.

²⁰⁶ In 2004, seat-only accounted for 20 per cent of Condor's business, for example, but it is expected to account for over 40 per cent in 2006 (Airline Business, November 2005).

²⁰⁷ MyTravel, for example, wet-leased six aircraft to Indonesia's Garuda for the 2003 Hadj (Airline Business, October 2003).

²⁰⁸ In August 2006, Hapag-Lloyd Express was merged back with TUI's leisure carrier Hapagfly (Airline Business, October 2006).

²⁰⁹ Airline Business, September and October 2002.

²¹⁰ Airline Business, June 2004.

²¹¹ TUI, for instance, has around 50 internet portals within its portfolio, and the group's online sales have gone up tenfold over the period 2000-2003 (see Airline Business, September 2004).

251. Long-haul routes of over 6 hours are also increasing in importance, and charter airlines have been registering record growth in traffic to destinations such as Kenya, Bali, the United States and the Caribbean. Long-haul travel has also been helped by an increasing liberal regulatory framework: non-scheduled services are usually either covered by separate, more liberal provisions in bilaterals, or by completely separate bilateral agreements. At times, they are even regulated in a unilateral manner without seeking reciprocal market access and/or a balance of benefits on the part of the party granting access as is generally the norm for bilateral agreements dealing with scheduled services. Some destinations, however, are still difficult to serve as access is limited to the duopoly between the national carriers.²¹²

2. Regulatory developments at ICAO

252. In March 2003, ICAO's fifth Worldwide Air Transport Conference (ATConf/5) reviewed the Template Air Services Agreements (TASA) for bilateral and for regional/plurilateral arrangements, which had been developed for the guidance and optional use, selectively, adapted or in full, by parties in their air transport relationships. With regard to non-scheduled/charter operations, the bilateral TASA contains the relevant provisions in its Annex II.²¹³ The Annex suggests that, while non-scheduled/charter operations may be dealt with in a variety of ways, e.g. as matters falling under the "grant of rights", or for separate regulatory attention, a simpler and more direct approach would be to refer, in the "grant of rights" article, to the conduct of 'international air services', rather than 'international scheduled air services'. It then lists three drafting options.

253. For the **traditional** approach, the TASA reads as follows:

"The provisions of this Agreement, except those dealing with Traffic Rights, Capacity and Tariffs shall be applicable also to non-scheduled flights operated by an air carrier of one Party into or from the territory of the other Party and to the air carrier operating such flights."

254. Two options are possible for the subsequent paragraph, namely:

Option 1

"The provisions of paragraph 1 of this Article shall not affect national laws and regulations governing the authorization of non-scheduled operations or to the conduct of air carriers or other parties involved in the organization of such operations."

Option 2

"Each Party shall give sympathetic consideration to applications for [non-scheduled flights] [charter flights] between their territories for passengers and cargo in accordance with their respective laws and regulations."

255. The explanatory notes indicate that this traditional approach provision may be used when the Parties anticipate the possibility of non-scheduled operations but wish to take no position on whether authorization would be granted. Option 1 leaves the determination of which non-scheduled services would be permitted and under what conditions to each Party's national law and regulation, whereas under option 2 "sympathetic consideration" is not a grant of access but rather a positive treatment to non-scheduled operations in general, reflecting the fact that the regulatory regime governing authorization for such operations is generally unilateral.

²¹² Airline Business, June 2004, September 2005; Les Echos, 12 January 2004.

²¹³ The regional/plurilateral TASA does not exhibit substantial differences.

256. For the **transitional** approach, the TASA presents three options, as follows:

Option 1

"1. Each Party shall authorize non-scheduled passenger flights between points at which no established scheduled air services exist. In cases where such scheduled services exist, authorizations shall be granted provided the offer of non-scheduled flights does not endanger the economic stability of existing scheduled services.

2. When series of non-scheduled passenger flights are requested, these must correspond to the definition of "inclusive package tours" and must be carried out on a round trip basis, with pre-established departures and returns."

Option 2

"1. The airlines of each Party designated pursuant to this Agreement to operate under this Annex shall have the right to operate non-scheduled international air transport over the routes specified and in accordance with the rights granted for scheduled services in this Agreement.

2. Each Party shall extend favourable consideration to applications by airlines of the other Party to carry traffic not covered by this Annex on the basis of comity and reciprocity."

Option 3

"1. The [designated] airlines of one Party shall[, in accordance with the terms of their designation and of the Route Schedule at Annex __,] be entitled to perform international non-scheduled air transportation to and from any point or points in the territory of the other Party, either directly or with stop-overs en route, for one-way or round trip carriage of any traffic to or from a point or points in the territory of the Party which has designated the airline. Multi-destination charters shall also be permitted. In addition, [designated] airlines of one Party may operate charters with traffic originating in or destined for the territory of the other Party.

2. Each [designated] airline performing air transportation under this provision shall comply with such laws, regulations and rules of the Party in whose territory the traffic originates, whether on a one-way or round trip basis, as that Party now or hereafter specifies shall be applicable to such transportation."

257. Since many parties were traditionally concerned about the impact of non-scheduled passenger services on scheduled services, the ICAO Secretariat indicates in the explanatory notes that option 1 under the transitional approach would have no adverse impact on scheduled services. Three options are foreseen to this effect: first, authorizing non-scheduled passenger services between points not served by scheduled services (usually referred to as "off-route charters"); second, not permitting non-scheduled passenger services which would adversely impact on scheduled services; and, third, authorizing inclusive tour charters which are not regarded as endangering the economic viability of scheduled services.

258. Option 2 under the transitional approach opens the routes specified in the agreement to non-scheduled services under the same conditions for scheduled services, while off-route charters may be approved on the basis of comity and reciprocity, resulting in the amount and type of such routes being determined by the Party with the most restrictive view of such charters.

259. In option 3, the Parties stipulate that the rules of the country of origin of the operation should be applied, thus possibly facilitating the conduct of the non-scheduled operations. The first paragraph spells out broad market access conditions, whereas the second paragraph applies the country of origin rules. Without the bracketed language all airlines of each Party would be authorized by the other Party to perform the non-scheduled services described in the first paragraph.

260. Finally, the **full liberalization** approach may be used by Parties wishing to liberalise non-scheduled services and is usually found in liberal or "open skies" agreements, according to ICAO's explanatory notes. In terms of rights and market access, it equates non-scheduled with scheduled services with regard to the airlines designated by each Party. It contains a provision calling for favourable consideration of other non-scheduled services, such as those by airlines non-designated to provide scheduled services or seventh freedom passenger services. It reads as follows:

"Section 1

Airlines of each Party designated under this Annex shall, in accordance with the terms of their designation, have the right to carry international charter traffic of passengers (and their accompanying baggage) and/or cargo (including, but not limited to, freight forwarder, split, and combination (passenger/cargo) charters):

Between any point or points in the territory of the Party that has designated the airline and any point or points in the territory of the other Party; and

Between any point or points in the territory of the other Party and any point or points in a third country or countries, provided that, except with respect to cargo charters, such service constitutes part of a continuous operation, with or without a change of aircraft, that includes service to the homeland for the purpose of carrying local traffic between the homeland and the territory of the other Party.

In the performance of services covered by this Annex, airlines of each Party designated under this Annex shall also have the right: (1) to make stopovers at any points whether within or outside of the territory of either Party; (2) to carry transit traffic through the other Party's territory; (3) to combine on the same aircraft traffic originating in one Party's territory, traffic originating in the other Party's territory, and traffic originating in third countries; and (4) to perform international air transportation without any limitation as to change, at any point on the route, in type or number of aircraft operated; provided that, except with respect to cargo charters, in the outbound direction, the transportation beyond such point is a continuation of the transportation from the territory of the Party that has designated the airline and in the inbound direction, the transportation to the territory of the Party that has designated the airline is a continuation of the transportation from beyond such point. Each Party shall extend favourable consideration to applications by airlines of the other Party to carry traffic not covered by this Annex on the basis of comity and reciprocity.

Section 2

Any airline designated by either Party performing international charter air transportation originating in the territory of either Party, whether on a one-way or round-trip basis, shall have the option of complying with the charter laws, regulations, and rules either of its homeland or of the other Party. If a Party applies different rules, regulations, terms, conditions, or limitations to one or more of its airlines, or to airlines of different countries, each designated airline shall be subject to the least restrictive of such criteria.

However, nothing contained in the above paragraph shall limit the rights of either Party to require airlines designated under this Annex by either Party to adhere to requirements relating to the protection of passenger funds and passenger cancellation and refund rights.

Section 3

Except with respect to the consumer protection rules referred to in the preceding paragraph above, neither Party shall require an airline designated under this Annex by the other Party, in respect of the carriage of traffic from the territory of that other Party or of a third country on a one-way or round-trip basis, to submit more than a declaration of conformity with the applicable laws, regulations and rules referred to under section 2 of this Annex or of a waiver of these laws, regulations, or rules granted by the applicable aeronautical authorities."

261. The ICAO explanatory notes also clarify that the difference between this full liberalisation approach and option 3 under the transitional approach is the ability of the designated airline, under the former scenario, to choose either the charter rules of its own country or those of the other Party for the operation of its non-scheduled services.

262. The ICAO World Air Services Agreements database, 2005 edition, shows that, out of the 1970 bilateral Air Services Agreements considered²¹⁴, six apply exclusively non-scheduled services and another 213 cover both scheduled and non-scheduled services.

²¹⁴ ASAs between EC Member States are outdated and hence have been disregarded.

PART C

REGIONAL AIR TRANSPORT SERVICES

C. REGIONAL AIR TRANSPORT SERVICES

263. As was indicated in the compilation (page 33, paragraph 122) and in document S/C/W/270 (page 75, paragraph 251), there is no globally accepted legal definition of the concept of regional carrier. In practice, however, professional associations and the specialized press use one or other of the following five definitions:

- Carriers operating aircraft with 19 to 150 seats;
- carriers operating aircraft with fewer than 100 seats;
- carriers operating aircraft with 19 to 100 seats;
- carriers operating between a secondary airport and a hub, or between two secondary airports;
- carriers flying predominantly within a single region, avoiding the main trunk routes and largely using aircraft types with fewer than 100 seats.

264. This section will deal with the operations of regional carriers as defined in the last tiret above²¹⁵, regardless of their status in relation to the major airlines which they feed (fully independent airlines/affiliated or franchised airlines/subsidiaries of major airlines). Aspects specific to franchising have already been addressed in document S/C/W/270, pages 75-78, paragraphs 249-262.

265. This section will mainly be concerned with economic developments in the sector during the period under review. Little regulatory information is available for the sector. Regarding short or medium-haul links, the sector is mainly governed by the regime for cabotage, or by regional/plurilateral agreements in areas with numerous frontiers located not far apart (for example, European Communities regulations, regulations under various existing regional/plurilateral agreements in South-East Asia). Generally speaking, these plurilateral agreements do not distinguish regional carriers from other carriers and the general rules under these agreements (as described elsewhere in the second review documentation) are therefore applicable to them.

1. Overall developments

266. The passenger traffic rankings of the top fifty regional airlines at the beginning and end of the period under review (Table 23) provide a fairly good overview of the situation of regional carriers.

²¹⁵ This is the definition used by Airline Business in its annual studies on regional carriers.

Table 23
Top 50 regional airlines by passenger numbers, 2000 and 2005

2000					2005				
Rank	Airline	Country/territory	Pax (000)	Fleet (units)	Rank	Airline	Country/territory	Pax (000)	Fleet (units)
1	American Eagle	USA	12,184	218	1	American Eagle	USA	17,534	258
2	Air Canada	Canada	8,500	76	2	SkyWest Airlines	USA	16,600	242
3	Comair	USA	8,094	108	3	ExpressJet	USA	15,987	269
4	Continental Express	USA	7,800	151	4	Mesa Airlines	USA	13,088	165
5	US Airways Express	USA	6,753	130	5	Atlantic Southeast Airl	USA	12,031	157
6	Crossair	Switzerland	6,290	78	6	Comair	USA	11,104	176
7	Mesaba Airlines	USA	6,104	106	7	Pinnacle Airlines	USA	8,105	124
8	Atlantic Southeast Airlines	USA	6,098	94	8	Chautauqua Airlines	USA	7,800	95
9	Lufthansa CityLine	Germany	5,660	53	9	Air Wisconsin	USA	6,859	77
10	SkyWest Airlines	USA	5,598	103	10	Horizon Air	USA	6,481	68
11	Horizon Air	USA	5,044	62	11	Lufthansa CityLine	Germany	5,975	81
12	TAM	Brazil	5,000	53	12	Air Canada Jazz	Canada	5,946	130
13	Mesa Airlines	USA	4,600	105	13	Mesaba Airlines	USA	5,704	89
14	Rio-Sul	Brazil	3,954	42	14	Air Nostrum (Iberia Regional)	Spain	4,689	57
15	Air Wisconsin	USA	3,857	39	15	PSA Airlines	USA	4,185	50
16	UNI Airways Corp	Chinese Taipei	3,783	28	16	Trans States Airlines	USA	4,159	69
17	Atlantic Cost Airlines	USA	3,779	84	17	Austrian Arrows	Austria	4,107	53
18	KLM uk	UK	3,778	30	18	Shandong Airlines	China	4,012	31
19	Delta Air Transport	Belgium	3,300	31	19	Aegean Airlines	Greece	4,007	20
20	Eurowings	Germany	3,175	40	20	Regional	France	3,745	63
21	Midway Airlines	USA	2,967	28	21	Brit Air	France	3,484	43
22	Qantas Regionals	Australia	2,886	44	22	BA Connect	UK	3,407	50
23	Air Nostrum	Spain	2,758	31	23	Piedmont Airlines	USA	3,389	63
24	ACES Colombia	Colombia	2,553	24	24	SN Brussels Airlines	Belgium	3,212	38
25	British Regional Airlines	UK	2,523	40	25	Swiss	Switzerland	3,084	n/a
26	British European	UK	2,444	26	26	UNI Air	Chinese Taipei	2,968	24
27	KLM cityhopper	Netherlands	2,167	25	27	TransAsia Airways	Chinese Taipei	2,959	n/a
28	Binter Canarias	Spain	2,116	11	28	KLM cityhopper	Netherlands	2,922	54
29	Trans States Airlines	USA	2,000	77	29	Binter Canarias	Spain	2,700	15
30	Qantas New Zealand	New Zealand	2,000	14	30	Executive Airlines	USA	2,628	40
31	Tyrolean Airways	Austria	2,000	33	31	Merpati Nusantara	Indonesia	2,600	n/a
32	Executive Airlines	USA	1,974	19	32	Iran Aseman Airlines	Iran	2,545	36
33	SAS Commuter	Denmark	1,800	26	33	China Easter Airlines Wuhan	China	2,321	n/a
34	CityFlyer Express	UK	1,700	19	34	Eurowings	Germany	2,193	33
35	Olympic Aviation	Greece	1,587	20	35	Bangkok Airways	Thailand	2,140	16
36	Air Littoral	France	1,538	40	36	Alitalia Express	Italy	2,128	35
37	Widerø's Flyveselskap	Norway	1,510	28	37	KLM cityhopper (UK)	UK	2,021	n/a
38	Kendell Airlines	Australia	1,478	28	38	MidAtlantic Airways	USA	1,900	n/a
39	Arkia Israeli Airlines	Israel	1,466	18	39	Widerø's Flaveselskap	Norway	1,825	27
40	Brit Air	France	1,445	33	40	Mandarin Airlines	Chinese Taipei	1,789	14
41	Aegean Airlines	Greece	1,439	9	41	CCm Airlines	France	1,551	13
42	Express Airlines I	USA	1,378	31	42	Mount Cook Airlines	New Zealand	1,500	12
43	Skyways Express	Sweden	1,355	28	43	Eastern Australia Airl.	Australia	1,492	20
44	Airlink (Qantas)	Australia	1,282	15	44	Blue1	Finland	1,456	15
45	Chautauqua Airlines	USA	1,281	43	45	CityJet	Ireland	1,436	19
46	Corse Méditerranée	France	1,200	n/a	46	Air Dolomiti	Italy	1,293	19
47	Great Lakes Airlines	USA	1,118	51	47	Shuttle America	USA	1,250	50
48	Bahamasair	Bahamas	1,066	11	48	Aerolitoral	Mexico	1,167	30
49	Air Midwest	USA	1,028	13	49	SAM Colombia	Colombia	1,153	7
50	Nordeste	Brazil	1,000	8	50	Regional Express	Australia	1,094	30

Note: n/a = not available

Source: Airline Business, May 2001 and May 2006.

267. In terms of traffic, seat capacity and load factor, continuous statistical series are available for the period under review in respect of the top 100 regional airlines ranked by traffic.

268. Table 24 gives an overview of the data in question.

Table 24
Traffic, seat capacity, load factor and fleet of the top 100 regional airlines, 2000-2005

Measure	Units	Latest year		Annual change for previous rankings				
		2005	Change over 2004	2004	2003	2002	2001	2000
Passengers	Thousand	256,748	11.0%	18.7%	10.2%	10.5%	0.1%	9.0%
Passenger traffic	RPK million	160,132	14.4%	20.2%	21.0%	19.9%	5.3%	17.4%
Seat capacity	ASK million	232,156	10.7%	15.2%	16.1%	16.0%	3.2%	17.3%
Load factor	Percentage	68.1%	2.1	2.8	2.6	2.0	-0.6	0.0
Fleet	Units	3,609	-96	3,705	3,563	3,466	3,580	3,033

Notes: RPK = Revenue Passenger-Kilometre. ASK = Available Seat-Kilometre.

Source: Airline Business, May 2006.

269. Whatever measure is used, the devastating effects of the events of 11 September 2001 are clearly apparent but so is the sector's speed of recovery, which far outstrips that of the long-haul carriers which have taken several years to absorb the shock. One explanation is that the major airlines had in many cases reduced their capacity and substituted their own flights with flights operated by regional airlines with which they had a link, particularly on the domestic US market.

270. Since 2002, growth rates in the number of passengers, revenue passenger-kilometres and capacity measured in available seat-kilometres have all exceeded 10 per cent, in spite of the increasingly frontal competition regional carriers face from low-cost carriers.

271. The geographical breakdown of the regional carriers' operations at the beginning and end of the period under review (Table 25) is also significant.

Table 25
Top 100 regional airlines by geographical region, 2000 and 2005

Region	Passengers		Fleet (units)		Carrier numbers	
	2000 (thousands)	2005 (thousands)	2000	2005	2000	2005
North America	96,416	150,114	1,737	2,296	33	27
Europe	63,094	68,540	890	925	44	42
Asia-Pacific	12,940	27,099	153	209	10	17
Latin America	16,145	5,517	200	104	9	9
Africa/Middle East	3,220	5,478	53	75	4	5
Total	191,815	256,748	3,033	3,609	100	100

Source: Airline Business, May 2001 and May 2006.

272. It will be noted that traffic growth was very strong in North America and the Asia-Pacific region, but much more modest in Europe and Africa/Middle East. The more than 50 per cent decline in Latin American traffic is undoubtedly explained by the fact that some of the top 100 regional airlines filed for bankruptcy, while others were absorbed by major airlines. The economic cycles of the Latin American economies may have been another relevant factor. In any event, Airline Business's regional transport data should be interpreted cautiously. They reflect only developments affecting the top 100 airlines and, as such, are not even close to full traffic coverage, since complete

statistical series are unfortunately lacking. The Airline Business sample is thus skewed by the effects of concentration.

2. Regional developments

(a) North America

273. Prior to the events of 11 September 2001, US regional carriers were experiencing strong growth, boosted by the replacement of turboprops by narrow-bodied regional jets. Thus, between 1996 and 2001, the number of regional jets rose from 90 to 569, the number of airports served by such jets from 85 to 200, the number of passengers carried by 40 per cent and the number of revenue passenger-kilometres flown by 60 per cent.

274. The main problem faced by regional carriers was the limitation on growth imposed by the scope clauses negotiated with the pilots' unions. These clauses made the expansion of regional jet fleets conditional on expansion of long-haul fleets and prevented regional jet pilots (who are paid an average of US\$100 an hour) from replacing major airline pilots (who receive a minimum US\$175 an hour).

275. One of the solutions used by carriers to overcome this obstacle was to spin off their regional subsidiaries and then establish franchise links with them (this trend is described in detail in document S/C/W/270, pages 76-77, paragraph 254).

276. One immediate impact of 9/11 was the trimming of capacity by the major airlines and the assignment of some of their own routes to their regional partners with smaller aircraft. Thus, according to Raymond James Equity Markets Research, in the fourth quarter of 2001 regional jet flights were up more than 36 per cent, while flights of narrowbodies were down 21 per cent and widebody flights declined by 10 per cent. At the same time, turboprop flights were also seriously affected (26 per cent decline) and some routes were abandoned on account of non-profitability. Globally, however, the regional carrier sector started growing again in 2002.

277. All the major airlines' restructuring plans post 9/11 included a component geared to the elimination, or at least relaxation, of the scope clauses. For example, the number of regional jets that could be used by regional affiliates of US Airways and by the airline itself rose from 170 to 465. This enabled US Airways to order 50 Embraer ERJ 145s and ERJ 170s and to launch a new regional subsidiary, MidAtlantic Airways, to operate them.

278. In fact, the regional jet has become an indispensable part of the air transport landscape in the United States, allowing carriers to replace or supplement mainline aircraft, to reduce costs on routes generating little or no profit, while maintaining their market presence. According to the Avstat consultancy, the route breakdown for the introduction of regional jets over the ten-year period 1993-2003 was as follows: 36 per cent all new routes, 25 per cent mainline route replacement, 20 per cent mainline service supplementation and 19 per cent turboprop supplementation. Regional jets were also used to provide non-stop flights to new city pairs, such as Newark to Oklahoma City, which had never had non-stop service before. In some cases, mainline carrier hubs were converted into regional jet hubs (for example, Columbus, Ohio, which was taken up by Chautauqua Airlines, a Delta affiliate, after being abandoned by America West, or Saint Louis, a former TWA hub, which American Airlines assigned to its regional affiliate, American Eagle, after purchasing TWA).

279. Another notable development, which concerns the types of contract concluded between major airlines and regional carriers, is the gradual disappearance of the "fee per departure" contract, under which regional carriers were guaranteed a fixed sum regardless of how full the flight was and what fares were paid.

280. Regional and low-cost air transport have become increasingly blurred, as illustrated by the increase in orders for 70-100 seat planes by low-cost carriers, particularly since 2003. Low-cost airline Jet Blue, for instance, has placed an initial order for 100 Embraer 190s, a type of aircraft that Embraer itself no longer describes as "regional".

281. In contrast, the regional carrier Atlantic Coast Airlines, after severing its ties with United, sought unsuccessfully to transform itself into a low-cost carrier, under the name Independence Air, using larger aircraft in addition to its regional fleet.

282. The growth and profitability rates of regional carriers have so much stronger than those of the majors that, in some cases, they have succeeded in reversing the traditional relationship of dependence between these two types of operator. For example, the regional carriers Air Wisconsin and Republic Airways each invested US\$125 million in United Airways in February/March 2005, enabling them jointly to acquire 25 per cent of the shares of that major carrier and to influence its decisions.

283. The regional sector continued its consolidation during the period under review. In 2000, the top five carrier groupings in the United States accounted for nearly 50 per cent of emplanements, and the top 10 for 75 per cent, as illustrated by Table 26.

Table 26
Top ten airlines' share of total regional emplanements in the United States, 2000

Rank	Grouping	Emplanements (millions)	Emplanements (share)
1	Delta Connection	19.5	24.5
2	American Eagle	15.0	18.9
3	Continental Express	7.6	9.6
4	Northwest Airlinck	7.1	8.9
5	US Airways Express	6.7	8.4
6	Alaska Air Group	5.1	6.4
7	Mesa Air Group	4.5	5.6
8	Atlantic Coast	3.6	4.5
9	Trans States	2.1	2.6
10	Great Lakes	1.1	1.4

Source: FAA, cited in Airline Business, May 2001.

284. No exactly comparable figures are available for 2005. However, consolidation at the beginning and end of the period can also be calculated, this time for the whole of North America, on the basis of the number of passengers carried (Table 27).

Table 27
Passenger traffic of the top ten North American regional airlines, 2000 and 2005

2000				2005			
Rank	Airline	Country/ territory	Passengers (thousands)	Rank	Airline	Country/ territory	Passengers (thousands)
1	American Eagle	USA	12,184	1	American Eagle	USA	17,534
2	Air Canada Regional	Canada	8,500	2	SkyWest Airlines	USA	16,600
3	Comair	USA	8,094	3	ExpressJet	USA	15,987
4	Continental Express	USA	7,800	4	Mesa Airlines	USA	13,088
5	US Airways Express	USA	6,753	5	Atlantic Southeast A/I	USA	12,031
6	Mesaba Airlines	USA	6,104	6	Comair	USA	11,104
7	Atlantic Southeast Airlines	USA	6,098	7	Pinnacle Airlines	USA	8,105
8	SkyWest Airlines	USA	5,598	8	Chautauqua Airlines	USA	780
9	Horizon Air	USA	5,044	9	Air Wisconsin	USA	6,859
10	Mesa Airlines	USA	4,600	10	Horizon Air	USA	6,481
Total			70,775				108,569

Source: Airline Business, May 2001 and May 2006.

285. The top five airlines accounted for around 45 per cent of traffic in 2000 and just over 50 per cent in 2005.

286. The top ten airlines accounted for about 73 and 72 per cent of traffic in 2000 and 2005, respectively.

287. The emergence of strong regional groupings as a result of the acquisition by independent carriers of the former affiliates of major airlines was described in detail in the section devoted to franchising in the second review document S/C/W/270 (page 77, paragraph 259).

(b) Europe

288. Table 28 compares the passenger traffic of the top ten regional airlines at the beginning and end of the period under review.

Table 28
Passenger traffic of the top ten European regional airlines, 2000 and 2005

2000				2005			
Rank	Airline	Country/territory	Passengers (thousands)	Rank	Airline	Country/territory	Passengers (thousands)
1	Crossair	Switzerland	6,290	1	Lufthansa CityLine	Germany	5,978
2	Lufthansa CityLine	Germany	5,660	2	Air Nostrum	Spain	4,689
3	KLM UK	United Kingdom	3,778	3	Austrian Arrows	Austria	4,107
4	Delta Air Transport	Belgium	3,300	4	Aegean Airlines	Greece	4,007
5	Eurowings	Germany	3,175	5	Régional	France	3,745
6	Air Nostrum	Spain	2,758	6	Brit Air	France	3,484
7	British Regional Airlines	United Kingdom	2,523	7	BA Connect	United Kingdom	3,407
8	British European	United Kingdom	2,444	8	SN Brussels Airlines	Belgium	3,212
9	KLM cityhopper	Netherlands	2,167	9	Swiss	Switzerland	3,084
10	Binter Canarias	Spain	2,116	10	KLM cityhopper	Netherlands	2,922
Total			34,211				38,635

Source: Airline Business, May 2001 and May 2006.

289. The level of concentration in the European market is lower than in the US market. Thus, at the beginning of the period under review, the top five carriers accounted for about 35 per cent of passenger traffic (compared with 45 per cent in the United States), and in 2005 for just under 33 per cent. However, these figures need to be qualified in view of the increasing number of franchise arrangements and acquisitions made by major airlines, developments which appear to be the exact opposite of the spin-off trend in the United States.²¹⁶ These developments were described in detail in document S/C/W/270, pages 77-78, paragraphs 260-262.

290. One specifically European phenomenon²¹⁷ is the transformation of certain regional carriers into low-cost carriers. For example, the regional carrier Norwegian Air Shuttle sold its fleet of Fokker 50 turboprops in order to operate Boeing 737s under the name Norwegian. The British carrier Flybe also transformed itself into a low-cost carrier, though in this case seeking to reap cost benefits from new turboprops, in particular the Dash 8 Q400. Flybe also left the European Regions Airline Association (ERA) to join the European Low Fares Airline Association.

291. The regional carriers consider that the conditions of competition with low-cost carriers are distorted by the discounts and financial assistance the latter obtain from airports. The recent monitoring of these discounts and financial aids by the European Commission is dealt with in the section devoted to airports in document S/C/W/270 and in section III.A of the present document dealing with low-cost carriers.

²¹⁶ British Airways, which sold its regional affiliate BA Connect to Flybe in 2006, stands out as an exception.

²¹⁷ Apart from the unsuccessful experience of Independence Air in the United States.

292. The growth of point-to-point services by low-cost carriers also seems to raise questions about the economic viability of the provision of such services by regional carriers beyond a certain traffic threshold. Some regional carriers, such as KLM Cityhopper, are also starting to question the economic viability of dedicated regional hubs (e.g. Basel-Mulhouse and Clermont-Ferrand), as well as the classical hub practice of aircraft arriving in waves, and are thinking of alternative models, such as the de-peaking practices already tried out by American Airlines at Chicago O'Hare and Dallas Fort Worth.

293. Some observers consider that, with low-cost carriers increasingly powerful on point-to-point services, European regional carriers will be prompted to concentrate on the feeding of mainline flights as in the United States. The arrival of the wide-bodied Airbus A380 in European fleets, which requires a strong feeding network in order for its operation to be economically viable, should further strengthen this trend.

294. At the same time, however, this feeding function is inhibited by regional carriers' increasingly restricted access to the main airports as a result of slot congestion and the emergence of a grey market in slots. These developments are described in detail in the section devoted to slots in the documentation for the second review.

295. Despite the competition from low-cost carriers, European regional airlines continued to post strong growth rates during the period under review and their operations were on the whole profitable, though less spectacularly so than in the United States.

296. One interesting development is the extension of global alliances to regional carriers. In 2004, Star Alliance was joined by the Finnish regional carrier Blue1²¹⁸ which at the same time had signed a code-sharing agreement with Lufthansa. The regional carrier Portugalia also joined the SkyTeam Alliance.

297. Other carriers concentrated on niche markets, such as premium service passengers in the case of the Belgian carrier VLM, which flies out of Antwerp with a hub at London City Airport, or public service obligation contracts.

(c) Latin America

298. Table 29 compares the passenger traffic of the top five Latin American regional airlines at the beginning and at the end of the period under review.

Table 29
Passenger traffic of the top five Latin American regional airlines, 2000 and 2005

2000				2005			
Rank	Airline	Country/ territory	Passengers (thousands)	Rank	Airline	Country/ territory	Passengers (thousands)
1	TAM	Brazil	5,000	1	Aerolitoral	Mexico	1,167
2	Rio-Sul	Brazil	3,954	2	SAM Colombia	Colombia	1,153
3	ACES Colombia	Colombia	2,553	3	Aires Colombia	Colombia	745
4	Bahamasair	Bahamas	1,066	4	Aerosur	Bolivia	661
5	Nordeste	Brazil	1,000	5	Aeromar	Chile	600
Total			13,573				4,326

Source: Airline Business, May 2001 and May 2006.

²¹⁸ Finnair, Finland's national carrier, is for its part a member of the rival alliance oneworld.

299. Four countries – Brazil, Argentina, Colombia and Mexico – alone account for 90 per cent of Latin America's domestic regional passenger traffic. Domestic markets in the other Latin American countries are too small to sustain regional airlines which thus need cross-border routes and, by extension, liberal international aviation regimes.

300. These needs may help explain the open skies provisions of the Andean Pact and similar arrangements, albeit limited to secondary routes, under the Fortaleza accord between the MERCOSUR countries. Some recent bilateral agreements, between Chile and Uruguay, for example, and between Paraguay and Bolivia, have relaxed restrictions on designations and cabotage. Chile, and to a lesser extent Argentina, have made such relaxation a main plank of their bilateral policy.

301. On the economic front, the picture is much more diverse. Several regional carriers were newly established during the period under review, such as Aerolineas Universal in Colombia, Star Up in Peru, U Air in Uruguay, Aeropacifico in Ecuador, OceanAir in Brazil and Lassa in Chile.

302. Several other regional airlines were absorbed by their parent companies, such as Nordeste and Rio Sul by Varig or Austral by Aerolineas Argentinas. As in Europe, the regional airlines are suffering from low-cost carrier competition, particularly in Brazil, as a result of the impressive success of GOL.

(d) Africa and the Middle East

303. While there is a considerable body of literature on the development of sixth-freedom carriers and low-cost carriers in the Middle East, as well as regular annual balance sheets for Africa, the only information available on regional transport in those markets is reproduced in Table 30. This lack of information must no doubt be attributed to the fact that regional transport in these two regions is still in its infancy.

Table 30
Passenger traffic of the top five regional airlines in Africa and the Middle East, 2000 and 2005

2000				2005			
Rank	Airline	Country/territory	Passengers (thousands)	Rank	Airline	Country/territory	Passengers (thousands)
1	Arkia Israeli Airlines	Israel	1,466	1	Iran Aseman Airlines	Iran	2,545
2	South African Express	South Africa	793	2	SA Express Airways	South Africa	1,010
3	Tuninter	Tunisia	483	3	TACV	Cape Verde	688
4	SA Airlink	South Africa	478	4	South African Airlink	South Africa	626
5	Royal Wings Airlines	Jordan	114	5	Arkia Israeli Airlines	Israel	509
Total			3,334				5,378

Source: Airline Business, May 2001 and May 2006.

(e) Asia-Pacific

304. The only available comprehensive data on regional transport in the Asia-Pacific region are reproduced in Table 31.

Table 31
Passenger traffic of the top ten Asia-Pacific regional airlines, 2000 and 2005

2000				2005			
Rank	Airline	Country/territory	Passengers (thousands)	Rank	Airline	Country/territory	Passenger (thousands)
1	UNI Airways Corp	Chinese Taipei	3,783	1	Shandong Airlines	China	4,012
2	Qantas Regionals	Australia	2,886	2	UNI Air	Chinese Taipei	2,968
3	Qantas New Zealand	New Zealand	2,000	3	TransAsia Airways	Chinese Taipei	2,959
4	Kendell Airlines	Australia	1,478	4	Merpati Nusantara	Indonesia	2,600
5	Airlink (Qantas)	Australia	1,282	5	China Eastern A/I Wuhan	China	2,321
6	Mount Cook Airlines	New Zealand	816	6	Bangkok Airways	Thailand	2,140
7	Bangkok Airways	Thailand	765	7	Mandarin Airlines	Chinese Taipei	1,789
8	Air Tahiti	French Polynesia	650	8	Mount Cook Airlines	New Zealand	1,500
9	Hazelton Airlines	Australia	402	9	Eastern Australia Airlines	Australia	1,492
10	Air Mandalay	Myanmar	160	10	Regional Express	Australia	1,094
Total			14,222				22,875

Source: Airline Business, May 2001 and May 2006.

305. China's regional carrier network is still in its infancy. The regional fleet in 2003 comprised 72 units out of a total fleet of 670 aircraft. In 2006, the regional fleet's share of the total had shrunk to only 6 per cent, albeit in a national fleet that was expanding overall. According to the Chinese operators themselves, market yield is still very poor because of import taxes on aircraft, aircraft fees that are not matched to the size of aircraft, tariff regulations that are deemed excessive, and a still imperfect route network. The Chinese Government is encouraging the development of regional aviation in certain areas such as the north-west, by means of subsidies and other incentives to operators.

306. However, the market is generally agreed to show considerable potential, and the aircraft constructor Embraer, for example, has opened a joint venture factory with the Chinese constructor AVIC I at Harbin to produce its 50-seat ERJ 145s. The other Chinese civilian constructor, AVIC II, has also started development of a 90-seat regional transport aircraft, the ARJ 21, which should enter into service in 2009.

307. A further indicator of this market's potential is the Kunpeng Airways joint venture between Shen Zen Airlines and the US carrier Mesa, which was established in 2006 to operate 50-seat aircraft. Also in 2006, Hainan Airlines ordered 50 Embraer 50-seat ERJ 145s and 50 106-seat ERJ 190s, which will be operated out of Tainjin by a new affiliate, Grand China Express.

308. Very little information is available on the other Asian markets. Worth noting, however, is the placement by the Indian low-cost carrier Kingfisher, in 2005, of a firm order for 35 ATR 72 turboprops, with options on an additional 20, its aim being to establish a feeder network, at reasonable cost, for its low-cost flights from major Indian cities. Deccan Airways has also ordered 30 aircraft of this type.

309. Qantas, guided in this instance by fuel price considerations, also ordered 17 Dash 8 turboprops from the aircraft constructor Bombardier in 2004 for its regional network QantasLink.

310. According to Embraer's 2005 forecasts, the Asia-Pacific will account for roughly 13 per cent of demand for 30 to 120 seat aircraft over the next 20 years, that is, a total of 1,000 aircraft, 590 of which will be in China and 160 in India.

311. India is already encouraging this type of transport by means of a programme offering incentives to carriers flying aircraft with fewer than 80 seats into 48 designated small airports. The incentives include 5 years of tax-free operations, reduced aviation fuel taxes and exemption from parking and air navigation charges.

PART D

GENERAL AVIATION SERVICES

D. GENERAL AVIATION SERVICES

312. As was explained in the compilation (pages 149-151, paragraphs 119-135), the general aviation sector comprises two subsectors: business aviation and aerial work.

313. Overall general aviation data have not been available since 1998, when the ICAO dropped the requirement for its member States to report such data.²¹⁹ The data are therefore fragmentary, partial and diverse. While the business aviation sector is relatively well-documented as it constitutes an essential market for aircraft manufacturers such as Bombardier, Embraer, Dassault, Gulfstream or Cessna, aerial work, which is often done using piston-engine aircraft and helicopters by highly specialized small and medium-sized firms with little international experience, is not well documented from either the economic or the regulatory standpoint.

314. It would be wrong, however, to overlook the economic importance of these two subsectors which, in terms of pilot and aircraft numbers, stand comparison with the commercial aviation sector. Together, in fact, they account for four-fifths of civilian aircraft and two-thirds of pilots in employment.

315. From the regulatory standpoint, the period under review was marked by a greater level of activity than the period covered by the first review. What is striking, however, is that market access questions as such accounted for only a small fraction of regulatory activities.

1. Economic developments

(a) General aviation as a whole

316. ICAO²²⁰ notes that, while much of the world's general aviation activity is domestic, greater numbers of long-haul aircraft and improved ground infrastructure have boosted the volume of international operations.

317. ICAO acknowledges that it is not in possession of worldwide statistical data, but notes that, in the United States alone, this sector in 2005 had contributed more than US\$150 billion to GDP and had directly or indirectly employed more than 1.2 million people, whose collective earnings exceeded US\$53 billion. A Federal Aviation Administration study of April 2003 had estimated the economic impact of general aviation at US\$76 billion, a little over half the figure mentioned above, which seems to attest to strong growth since that time, subject to all necessary statistical reservations.

318. According to the International Council of Aircraft Owner and Pilot Associations (IAOPA), the developments presented in Table 32 have been observed worldwide since 2003²²¹ in the number of pilots employed, aircraft in service and flight hours actually logged:

Table 32
Number of pilots employed, aircraft used and flight hours logged
in the general aviation sector, 2003-2005

	2003	2004	2005
Pilots employed	1 million	1.3 million	1.3 million
Number of aircraft	368,000	370,000	385,000
Flight hours	39 million	39 million	34 million

Source: IAOPA.

²¹⁹ As explained in the 2003 ICAO Annual Report, ICAO Journal No. 6, 2004.

²²⁰ In its "Annual Review of Civil Aviation 2005", ICAO Journal, No. 5, 2006.

²²¹ No data available for 2000, 2001 and 2002.

319. These figures show sharp fluctuations (an increase of 300,000 pilots, or one quarter of the workforce, in one year) and likely inconsistencies (30 per cent more pilots between 2003 and 2004 to fly just 0.5 per cent more planes). This is probably due, first, to the extremely cyclical nature of the sector (the reduction in flight hours from 39 million in 2004 to 34 million in 2005 is explained, *inter alia*, by increased training, fuel and maintenance costs and regulatory constraints) and secondly, to gaps in the statistics and their gradual improvement. Be that as it may, apart from cyclical fluctuations, the importance of the sector has to be acknowledged.

(b) Business aviation

320. The definition most commonly used, by ICAO in particular, is the one adopted by the International Business Aviation Council, namely:

"That sector of aviation which concerns the operation or use of aircraft by companies for the carriage of passengers or goods as an aid to the conduct of their business, flown for purposes generally considered not for public hire and piloted by individuals having, at the minimum, a valid commercial pilot license with an instrument rating".²²²

321. Business aviation is itself a very diverse sector. This diversity is described in an ICAO study of August 2005 on "International General and Business Aviation Access to Airports" in the following terms:

"Business aircraft are used by a whole range of people, from individuals who often fly rented, single-engine, piston-powered aircraft, to sales or management teams in large corporations, many of which own fleets of multi-engine, turbine-powered aircraft and employ their own flight crews, maintenance technicians and other aviation support personnel. While the majority of business aircraft missions are conducted on demand, i.e. on a non-scheduled basis, some companies have scheduled operations, known as corporate shuttles, which essentially are private in-house airlines. Corporations that operate business aircraft use modern, multi-engine, turbine-powered jets, turboprops or turbine helicopters that are certified to the highest applicable standards. Aircraft built specifically for business aviation vary from four-seat, short-range, piston-powered airplanes, to two- and three- engine corporate jets that can carry up to 19 passengers nearly 11,000 km. non-stop. Some companies even use airline-type jets of bigger capacity. Although individuals or companies own the majority of business aircraft, business aviation can also use arrangements such as chartering, leasing, fractional ownership, time-sharing, interchange agreements, partnerships and aircraft management contracts."

322. The number of business aviation operators is growing steadily: 14,000 at the end of 2002, 14,500 at the end of 2003, 15,000 at the end of 2004.²²³ Indeed, this sector experienced strong growth during the period under review, particularly in the United States, but also in Europe and Asia as a result of a combination of several factors. The two most important factors are the growing lack of fluidity in scheduled airline services due to increased security measures and the (relative) "democratization" of business aviation, which is linked, *inter alia*, to the emergence of "fractional ownership" schemes and the establishment of companies offering business aviation services on an hourly basis.

323. ICAO describes this trend in the following terms:

"Partly because of access restrictions to airports or for other reasons, including increased security measures and congestion of commercial air transport, business aviation has, over the recent past years, undergone a profound mutation. Once reserved to a narrow clientele of the

²²² ICAO, "International General and Business Aviation Access to Airports", August 2005, paragraph 211 on page 3.

²²³ No figures available for 2000, 2001 and 2005. (ICAO Journal, Number 6, 2003, 2004 and 2005.)

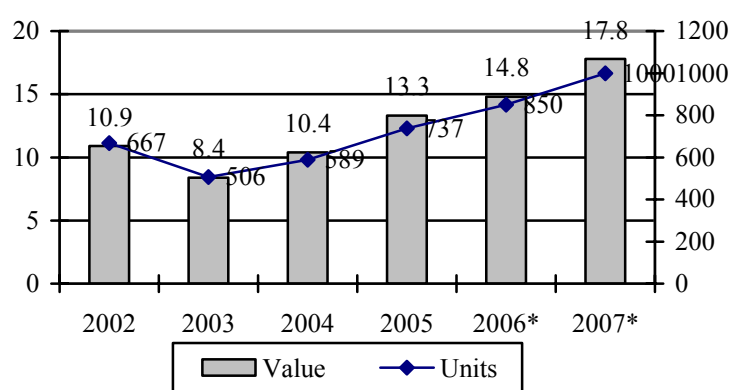
wealthy industry tycoons or multinational companies, it is steadily evolving as a business tool for smaller size companies and is at the disposal of middle managers. It is widely recognized that the cost is more than offset by the time saved and the increased efficiency that tailor-made aviation can bring. It has been observed that the users of private jets are more often intermediary executives than in the past and that demand for private long-haul flights has been expanding steadily".²²⁴

324. Paradoxically, the success of business aviation has resulted in the establishment of somewhat similar services by commercial airlines:

- Transatlantic flights at a fixed price between a European city and a city on the US west coast, with jet aircraft that can accommodate 10 to 18 passengers;
- similar products to co-owners of shared business aviation, with tariffs varying with distance;
- scheduled services on large size business jets offering 48 business class seats (three routes are presently operated between Germany and the United States);
- in order to replace defunct supersonic services, projects are under consideration with smaller (subsonic) jets offering four to five daily transatlantic flights;
- intra-European connections on business aircraft for long-haul passengers from Munich airport.

325. The aforementioned success of the business aviation sector is clearly reflected in the production of new aircraft and in fleet development (Chart 5). Aircraft production nevertheless went through a period of fairly sharp decline in 2002 and 2003 before rebounding strongly.

Chart 5
Number and value (US\$ billion) of new business jets produced by the leading manufacturers, 2002-2007



Note: * Forecast.

Source: Aviation Week & Space Technology, 16 October 2006.

326. The business aviation fleet also includes turboprops. There are no overall data from which to compare jet and turboprop fleets in 2000 and 2005. However, Table 33 gives an idea of the size of the top ten country markets in which jet and turboprop fleets were in operation in 2005.

²²⁴ ICAO, "International General and Business Aviation Access to Airports", August 2005.

Table 33
Business aviation fleets (jets and turboprops), 2005

Rank	Country	Fleet
1	United States	16,827
2	Canada	814
3	Mexico	733
4	Brazil	722
5	Germany	440
6	France	415
7	United Kingdom	346
8	Venezuela	334
9	South Africa	306
10	Australia	268

Source: ICAO, "Annual Review of Civil Aviation 2005", ICAO Journal No. 5, 2006.

327. The number of business aircraft doubled in the ten-year period 1995-2005. The manufacturers expect that the replacement market will be sufficient in itself to maintain growth and that, together with the non-US markets, it will have a counter-cyclical effect in the event of a recession in the United States. The forecasts prepared by aircraft manufacturers are extremely optimistic. Honeywell Aerospace expects to deliver 9,500 new business jets worth US\$156 billion between 2005 and 2015, while Rolls Royce foresees reactor production reaching 21,000 during the same period, with an overall value of US\$27 billion.

328. Well-known investors such as Warren Buffet's Berkshire Hathaway Fund have made the same wager. In 1998, Berkshire Hathaway acquired the NetJets company which, in 2006, owned 650 aircraft, 100 of them in Europe.²²⁵ Its European operations have only recently shown a profit. The company is now endeavouring to "democratize" its product and has launched two programmes, NetJets Private Jet Card and NetJets Corporate Card, which offer 25 hours of flight time over one or two years for a price starting at €124,000, with aircraft available within 24 hours. Since 2003, NetJets has extended its operations to Russia, the Middle East and North Africa.

329. Other fractional ownership operators are linked to manufacturers, such as Flexjet (Bombardier)²²⁶ or Travel Air (Raytheon). The fleet share of these fractional ownership companies was estimated at 10 per cent in 2000 and was forecast to double in a few years. Those forecasts are in fact being fulfilled. Thus, in 2006, fractional ownership schemes accounted for roughly 40 per cent of orders (firm and optional) placed with the major manufacturers.²²⁷ Fractional ownership schemes are also proving successful on the turboprop market. The Luxemburg company Jetfly, for example, purchased 14 turboprops in 2006 to supplement the 11 aircraft in its existing fleet. Jetfly charges between US\$385,000 and US\$850,000, depending on aircraft type, for a one-eighth aircraft share guaranteeing 62.5 flight hours per year for five years, and is also planning to expand to the Middle East.

330. "Card-based programmes" appear to be the next step in the "democratization" of business aviation. These involve the purchase of flight time "blocks" (22 to 100 hours) instead of ownership shares in a plane (typically one eighth or one sixteenth, fractions visibly inspired by the maritime "quirats" system). Examples include the Marquis, Jet, Vector, Jetpass and Skyjet programmes. A study by the Swiss Bank UBS estimates that, in the United States, 500,000 households have the means to participate in a card programme, whereas only 100,000 can afford fractional ownership shares. The

²²⁵ Compared with only 25 in 2002, which gives an idea of the growth of the market.

²²⁶ However, in March 2002, Bombardier stopped marketing its fleet directly and entered into agreements with seven European air taxi companies while maintaining the umbrella brand Flexjet and keeping control of flight scheduling. Bombardier had used the same procedure with five other air taxi companies when it extended its operations to Asia in February 2002.

²²⁷ Aviation Week & Space Technology, 16 January 2006.

card sector is thought to account for one hundred jets per year already and should grow by 20 per cent a year.

331. Prior to the events of 9/11, United Airlines, out of concern for the growing loss of premium service passengers, had established a subsidiary, Avolar, which planned a large-scale launch into the business aviation market, involving the purchase of 200 business aircraft over five years. United was forced to cancel these plans in March 2002. Since then, no commercial airline has really come up with a similar project for the purchase and operation of business aircraft. Along the same lines, but with a much lower investment, Lufthansa joined forces with NetJets to offer its first and business class passengers the option of onward flight in corporate aircraft from Munich, with a choice of more than 1,000 destinations²²⁸ at prices slightly lower than those charged for traditional business aviation flights (€4,500 to 5,500 for the Munich-Lugano connection for example, whereas the price of fractional ownership flights ranges from €3,500 to 8,000 per hour).

332. The air taxi market, also referred to as "on demand charter", has also expanded strongly and become truly international. The Swiss company Jet Aviation, recently acquired by the German investment fund Permira, manages a fleet of more than 160 air taxis in Europe (Zurich), Asia (Hong Kong, China), the Middle East (Dubai) and the United States (New Jersey). The fractional ownership and air taxi markets were roughly the same size (US\$1.5 billion in the case of the former and US\$1.8 billion dollars in the case of the latter), at least at the beginning of the period under review. Unfortunately, no equivalent figures are available for the end of the period.

333. Historically, the business aviation sector was launched in the United States where it continues to have the strongest presence with an overall market share of some 70 per cent in 2006, compared with 10 per cent for Europe. However, according to a February 2007 study by the French Directorate General of Civil Aviation, Europe's share of the market should rise to 16 per cent by 2011 and the world business aircraft fleet should double in the next 20 years, from 25,000 to 50,000 aircraft. At the same time, Latin America should achieve a 10 per cent share of the market by that date, compared with 4 per cent for the Middle East and Africa, with the United States still accounting for 61 per cent.

334. A recent study by Eurocontrol²²⁹, the pan-European organization for the coordination of air navigation services, reveals that business aviation traffic in Europe grew by 22 per cent in terms of movements between 2001 and 2005, while other air traffic grew by only 10 per cent. The study also indicates that the business aviation network covers 100,000 city pairs, or three times as many links as the commercial aviation network. Over 40 per cent of flights are flown empty for positioning purposes. Most business flights are between cities not served by non-stop commercial flights. The business and scheduled aviation markets in Europe each have around 700 operators. But the business aviation sector is roughly ten times smaller, in terms of turnover, than the scheduled commercial sector, which means that many operators have only one or two aircraft. Only 9 per cent of business flights go beyond a distance of 2,000 kilometres, while half are under 500 kilometres. By 2015 Eurocontrol expects business aviation to add between 0.3 and 0.7 per cent a year (if the economic model of air taxis using very light jets is successful) to the overall volume of commercial aviation traffic, which should grow by 3.3 per cent a year.

335. Professional observers see China as a promising market, even though in 2006 it had only 12 business aircraft in operation and ten or so on order. Development of the sector was hampered by the slowness of procedures for the approval of flight plans (three to five days) and by landing fees which can be higher than fuel costs. Even so, delays in flight plan approval procedures were reduced to six hours in 2006, and 120 of China's 400 airports became accessible to business aircraft, compared with only 50 in 2004.

²²⁸ One of the advantages of business aviation is the possibility of accessing a larger number of smaller airfields situated closer to the production sites visited by business customers.

²²⁹ Eurocontrol, "Getting to the Point: Business Aviation in Europe", Trends in Air Traffic, volume 1, 2006.

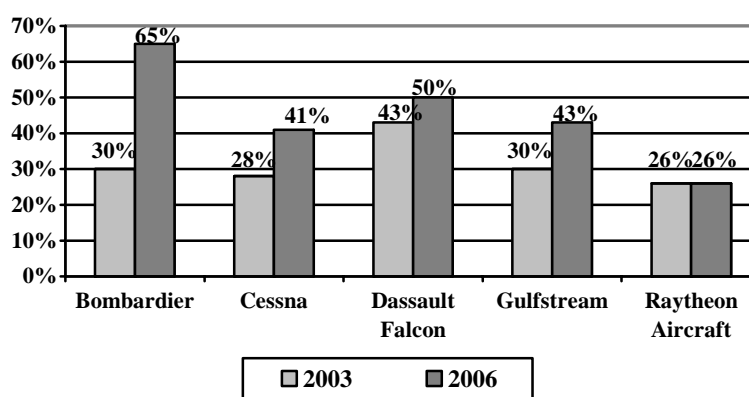
336. According to the Middle East Business Medium Aviation Association, business aviation in the Middle East generated revenue of US\$500 million in 2006 for charters, maintenance and support activity (compared with US\$2 billion in Europe). The number of flight-hours in that region is expected to double within five years.

337. Honeywell forecasts that Asia could see a jump in its share of the market, which is currently on a par with Europe, from 6.5 per cent to 13 per cent in five years. The Japanese market has limited scope for growth on account of heavy airport congestion. National security considerations in South Korea explain why the authorities are somewhat reluctant to see the sector develop. For the same reasons, ownership of a private aircraft is prohibited in Chinese Taipei.²³⁰ The Indian market is regarded as promising but has not yet taken off.

338. On the other hand, the Russian market is a major outlet for business aircraft manufacturers as is, more curiously, that of Nigeria. Brazil and Mexico are also important markets.

339. In any event, the US share of business aircraft orders, which stood at nearly 80 per cent at the beginning of the period under review, is declining steadily and has in some cases fallen below 50 per cent for some manufacturers (35 per cent for Bombardier in 2006), thus attesting to the boom in the sector without, however, signifying any weakening of growth in the North American market. These developments are illustrated in Chart 6.

Chart 6
Percentage of sales outside North America by the main business aircraft manufacturers, 2003-2006



Source: Aviation Week & Space Technology, 16 October 2007.

340. Another interesting recent commercial development is the production of very light jets (VLJs) for three to eight passengers, at a cost below US\$3 million per unit, by a number of aircraft manufacturers such as Embraer (Phenom 100 and 300), Adam (A700), Eclipse (Eclipse 500), Honda (Honda Jet), Cessna (Citation Mustang) and Piper (Piper Jet). A new start-up company based in Florida, Day Jet, has ordered 240 Eclipse 500s at US\$1.5 million each and intends shortly to launch air taxi services out of five cities in Florida to the south-western United States at a price of \$1 to \$3 per mile. Similarly, the Swiss company JetBird has ordered 50 Phenoms at US\$2.7 million each from Embraer, bringing the total number of orders for this aircraft by the end of 2006 to 350.

²³⁰ Aviation Week & Space Technology, 6 March 2006.

341. While the viability of the air taxi economic model at this level remains to be proved²³¹, the manufacturers, for their part, are investing on a massive scale: according to some forecasts²³², 500 VLJs will be produced by 2011. Regulatory or semi-regulatory problems, such as the development of appropriate insurance and training schemes for VLJs, also remain to be resolved.

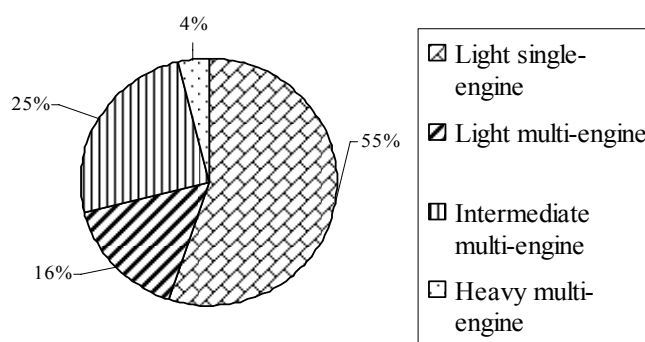
(c) Aerial work

342. Aerial work is defined by ICAO²³³ as "an aircraft operation in which an aircraft is used for specialized services such as agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement, etc". The possible classification for these activities was described during the first review (compilation, page 154, Table 11). ICAO notes that aerial work operations may be classified as commercial or non-commercial depending on the method of remuneration for the operation concerned.

343. Aerial work data are sparse and fragmentary. The only global study that the Secretariat has been able to obtain relates not to the period under review (2000-2005) but largely to the next period and deals only with the helicopter market. It was prepared by the equipment maker Honeywell Aerospace and deserves mention as it provides an overview of the market in terms of type of aircraft, region where used and type of customer.

344. The study, published in 2004, estimates that some 2,400 helicopters will be delivered for civilian purposes between 2004 and 2009, for a total value of US\$8.2 billion. The expected breakdown of these deliveries is as outlined in Charts 7 to 9.

Chart 7
Forecast helicopter deliveries by type of aircraft, 2004-2009



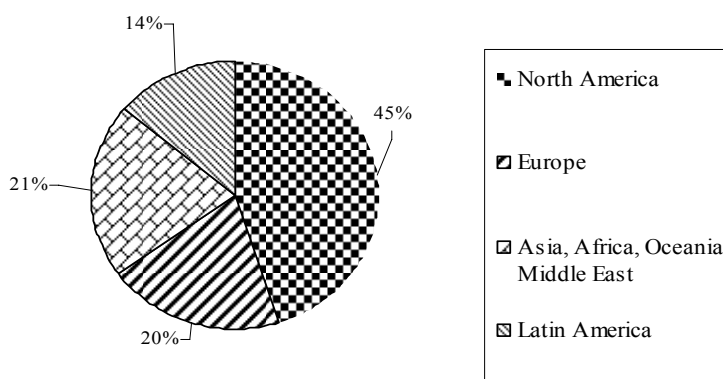
Source: Honeywell Aerospace, 2004.

²³¹ Bombardier, for example, already has an air taxi subsidiary, Skyjet International, which in 2006 carried 20,000 passengers, logged 10,000 flight hours and saw a 40 per cent increase in its operations compared with the previous year.

²³² Forecast International, cited in Aviation Week & Space Technology, 15 January 2007.

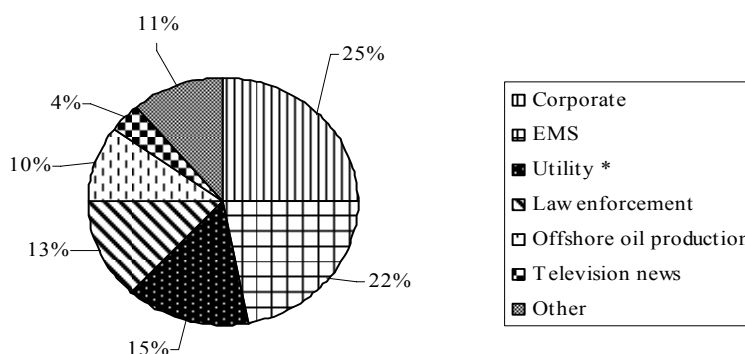
²³³ ICAO, "2003 Annual report", ICAO Journal, No. 6, 2004.

Chart 8
Forecast helicopter deliveries by type of aircraft, 2004-2009



Source: Honeywell Aerospace, 2004.

Chart 9
Forecast helicopter deliveries by customer segment, 2004-2009



Notes: * Includes cargo hauling, mining, construction and utility monitoring. EMS = Emergency Medical Services

Source: Honeywell Aerospace, 2004.

2. Regulatory developments

(a) Multilateral developments

(i) ICAO

345. No contributions dealing specifically with the question of general aviation were submitted at the fifth Worldwide Air Transport Conference held from 24 to 29 March 2003 in Montreal. On the other hand, in the context of the follow-up to the Conference on the Economics of Airports and Air Navigation Services, held in 2000,²³⁴ ICAO published a study in August 2005 on "International General and Business Aviation Access to Airports".

²³⁴ For further details concerning this Conference, see the sections of the compilation devoted to airport services (pages 74-117) and air navigation services (pages 121-148).

346. In the study, ICAO lists a series of restrictions imposed on business aircraft throughout the world by congested airports. These restrictions are summarized in Table 34.

Table 34
Restrictions on general aviation imposed by the world's main airports, 2005

Name	Airport	Nature of restriction						Comment
		Capacity	Slot allocation	Landing fees	Environment	Security	Other	
Americas								
Argentina	Buenos Aires						X	GA operational constraints
Brazil	Congonhas						X	GA operational constraints
Brazil	Congonhas						X	Priority to airlines for land use / allocation
Brazil	S. Dumont						X	
Brazil	Pampulha						X	
Canada	Toronto-Pearson		X					
Mexico	Mexico-B. Juarez						X	Closed to GA
USA	Bedford, MA				X			
USA	Torrance, CA						X	Hours of operation, type of aircraft
USA	San Diego, CA						X	Curfew
USA	Sta Monica, CA			X	X			
USA	Teterboro, NJ						X	Weight restriction
USA	Washington-Reagan, DC						X	Closed to GA
USA	Chicago O'Hare		X					
Asia-Pacific								
Australia	Sydney						X	List of approved aircraft during curfew not updated
Australia	Adelaide						X	
Australia	Essendon						X	
Australia	Gold Coast						X	
China	Shanghai-Hongqiao						X	Closed to GA
China	Yichang						X	Closed to GA
Japan	Narita	X	X		X		X	Curfew, parking limitations
Japan	Haneda	X	X					Parking and stage length limitations
Japan	Kansai		X					
Japan	Nagoya		X				X	Curfew
Japan	Chitose		X		X		X	Curfew
Japan	Sendai		X		X		X	Curfew
Japan	14 regional airports						X	Depends on CIQ availability
Mongolia	Ulan Bator						X	Fuel uplift restrictions
Thailand	Bangkok						X	Parking
Europe								
France	Paris-Ch. De Gaulle						X	Connection with commercial traffic requested
France	Nice						X	Parking
France	Lyon-Bron						X	Runway length
France	Le Castelet	X						
Germany	Berlin-Tempelhof						X	Threat of closure
Germany	Frankfurt	X	X					
Germany	Munich		X					
Italy	Rome-Fiumicino						X	GA operational constraints
Italy	Naples						X	Reduced hours of operation, parking
Italy	Florence		X	X	X			
Netherlands	Amsterdam		X					

Name	Airport	Nature of restriction						Comment
		Capacity	Slot allocation	Landing fees	Environment	Security	Other	
Norway	Oslo						X	Required use of Gardermoen
Portugal	Lisbon						X	Parking
Russian Federation	Petropavlovsk						X	Weight restriction
Spain	Madrid-Torrejon						X	Parking
Spain	Madrid-Barajas	X	X				X	Parking
Switzerland	Geneva		X					
Switzerland	Zurich		X					
United Kingdom	Fairoaks				X			
United Kingdom	Northolt		X					
United Kingdom	Heathrow	X	X					
United Kingdom	Gatwick		X					
United Kingdom	Stansted		X					
United Kingdom	London City				X			
United Kingdom	Farnborough		X					
United Kingdom	Manchester		X					

Notes: GA = General Aviation. CIQ = Customs, Immigration and Quarantine clearance.

Source: ICAO, "International General and Business Aviation Access to Airports", August 2005.

347. It should be pointed out, however, that the restrictions concerned are not commercial restrictions, since the table describes measures of discrimination in favour of commercial flights (regardless of the operators' nationality) and to the detriment of business flights (regardless of the operators' nationality). Moreover, the ICAO study makes no reference to discrimination based on nationality.

348. In 2005, with the assistance of the International Business Aviation Council (IBAC) and IAOPA, ICAO developed a proposal to amend the international rules governing general aviation (Annex 6, part 2 of the Chicago Convention). The amendments are intended to reflect current industry practices. They would comprise regulations applicable to the entire sector and specific regulations concerning corporate aviation, air taxis, owner-flown aircraft and fractional ownership. In the latter case, no amendment has yet been submitted.

349. ICAO's Air Navigation Commission reviewed this proposal in October 2006, and ICAO subsequently disseminated it to its members by means of a State letter for comments on its acceptability, with a deadline of 15 July 2007. The Air Navigation Commission and the ICAO Council will in turn examine the comments received. The amendments are expected to enter into force in November 2008.

(ii) *International Business Aviation Council*

350. Another noteworthy development at the multilateral level is the attempt at self-regulation made by professional members of the International Business Aviation Council, in the form of an International Standard for Business Aircraft Operations (IS-BAO), published in May 2002.²³⁵ This is a collection of procedures and requirements culled from corporate flight departments in North America and Europe, and reflecting the standards and recommended practices of ICAO (Annex 6, part 2 of the Chicago Convention). Pilot training and proficiency, safety and generic operating manuals are also covered by these rules, which can serve as a benchmark for audits. They have been welcomed by several aviation authorities.

²³⁵ The text of the rules is available at the following electronic address: <http://www.ibac.org/is-bao/isbao.htm>.

(b) Bilateral Developments

(i) *Free Trade Agreements signed by the United States*

351. During the period under review, aerial work, under the title "Specialty Air Services"²³⁶ (for the definition of this term, see the compilation, page 150, paragraph 124), was included in all the free trade agreements (FTAs) concluded by the United States, just as it had been previously in NAFTA. This was the case for agreements with Korea, Colombia, Peru, Australia, Chile, the Central American countries (Costa Rica, Nicaragua, El Salvador, Honduras, Guatemala), the Dominican Republic, Jordan, Morocco, Oman, Panama and Singapore. Both cross-border trade and investment are concerned by this inclusion. In the case of cross-border trade, the wording used is typically the following:

"This chapter [cross-border trade in services] does not apply to ... (c) air services, including domestic and international air transportation services, whether scheduled or non-scheduled, and related services in support of air services, other than ... (ii) specialty air services".

352. However, the United States systematically qualifies this commitment by means of a reservation with the following wording:

"Authorization from the Department of Transportation [DOT] is required for the provision for speciality air services in the territory of the United States. A person of [name of trading partner] will be able to obtain such an authorization given the application of Chapter Ten (Cross-Border Trade in Services) to specialty air services".

353. Specialty air services are also covered by the "investment" chapter of these agreements, where the United States also systematically qualifies its commitments by means of the following reservation:

"Foreign civil aircraft' require authority from the Department of Transportation to conduct specialty air services in the territory of the United States. 'Foreign civil aircraft' are aircraft of foreign registry or aircraft of US registry that are owned, controlled, or operated by persons who are not citizens or permanent residents of the United States (14 C.F.R. § 375.1). Under 49 U.S.C. a citizen of the United States means an individual who is a US citizen or a partnership in which each member is a US citizen or a US corporation of which the president and at least two-thirds of the board of directors and other managing officers are US citizens, which is under the actual control of US citizens, and in which at least 75 per cent of the voting interest in the corporation is owned or controlled by US citizens".

354. Investments in business aviation companies are also included in the agreements, subject to US legislation on control and ownership, which is also applicable to airline services.²³⁷ The trading partners of the United States have also made reservations covering their legislation on airline ownership.

(ii) *US – European Community relations*

355. Curiously, US-EC bilateral relations in the field of business aviation appear mainly to take the form of contacts between professional organizations. Thus, the US National Business Aviation Association forwarded to the FAA a request by the European Business Aviation Association to raise

²³⁶ The definition of this term, as found in the agreements, is the following: "any non-transportation air services, such as aerial fire fighting, sightseeing, spraying, surveying, mapping, photography, parachute jumping, glider towing, and helicopter-lift for logging and construction, and other airborne agricultural, industrial and inspection services."

²³⁷ See, for example, the sixth US reservation to the investment chapter of the agreement between the United States and Australia, Annex 1, page 6, at the following electronic address:
http://ustr.gov/assets/Trade_Agreements/Bilateral/Australia_FTA/Final_Text/asset_upload_file350_3425.pdf

the ceiling on authorized occasional planeload charters from six to twelve per year and to have the waiting time for approval reduced from several weeks to five days and to 48 hours for second-time requests.²³⁸ The FAA has not as yet taken any decision on this matter.

(iii) *Relations between the European Community and its trading partners*

356. The free trade agreements concluded by the European Community systematically include aerial work by virtue of their negative list structure and the absence of reservations concerning aerial work. On the other hand, business aviation is excluded, as it is covered by the reservation excluding scheduled and non-scheduled air transport services.

357. Since the beginning of the period under review (2000), the EC has signed free trade agreements with the following partners: Former Yugoslav Republic of Macedonia (Stabilization and Association Agreement); Croatia (Stabilization and Association Agreement); Algeria (Association Agreement); Egypt (Association Agreement); Israel (Association Agreement); Jordan (Association Agreement); Lebanon (Interim Agreement); Morocco (Association Agreement); Chile (Association Agreement); Mexico (Decision No. 2/2000 of the EC-Mexico Joint Council); and South Africa (Trade, Development and Cooperation Agreement).

(c) Regional and national developments

(i) *European Civil Aviation Conference*

358. The European Civil Aviation Conference set up a task force on fractional ownership in 2004.

359. The task force concluded that a fractional ownership and exchange programme should include the following elements;

"(a) the provision of services for management of the programme by a single programme manager acting on behalf of the owners;

(b) the availability of two or more aircraft for services;

(c) one or more owners per aircraft belonging to the programme, with at least one aircraft having more than one owner;

(d) each owner owning a minimum percentage (to be determined) in at least one of the programme's aircraft;

(e) an agreement on dry lease exchange of aircraft between all the owners;

(f) multi-annual agreements between participants in the programme, defining conditions with regard to ownership, management of the programme and exchange of aircraft between owners;

(g) an explicit statement in an appropriate legal framework that the operation of a fractional ownership programme falls under the private non-commercial transport category would be required, as would be an indication that part-owners in a fractional ownership programme are in operational control of the aircraft in the programme, but have the possibility to delegate all or part of the tasks associated with the operation of the aircraft to the programme manager;

²³⁸ Aviation Week & Space Technology, 5 June 2006; EBAA web site at: http://www.ebaa.org/content/dsp_page/pagec/home.

(h) a clear statement would be required that transport of passengers or goods or any operation for remuneration or hire under such a programme is prohibited;

(i) a prohibition on the sale or lease of an aircraft interest that is less than the "minimum fractional ownership interest" unless the flights associated with that interest are operated under a commercial regime by a certified and licensed air carrier; and

(j) a requirement that passengers on a fractional ownership flight must be "designated" by the relevant owner."

360. The ECAC is currently continuing work on the questions of operational control, obligations of programme managers and fractional owners, liability and security.

(ii) *Joint Aviation Authorities and the European Aviation Safety Agency*

361. Shortly before being replaced by the European Aviation Safety Agency (EASA), the Joint Aviation Authorities (JAA)²³⁹, the European equivalent of the Federal Aviation Administration, adopted the JAR-OPS 2 regulations for business aviation. However, these rules have not been fully approved. A new proposal from the EASA, based largely on the original document and the new ICAO standards under discussion (cf. above) will be issued for comment in the summer of 2007. EASA's definitive rules (EASA OPS 2) are not expected to be ready until 2010.

362. Among the many questions under discussion, two are of particular interest to professionals in the sector. The first concerns the burden of proof for validation of the safety management system: the operators favour *a posteriori* control, whereas the States would prefer *a priori* control. The second is the question of the status of fractional ownership. The current European rules inherited from the Joint Aviation Authorities treat operations under the fractional ownership regime as commercial operations, thus making them subject to the JAR-OPS 1 regime governing public transport operators. The business aviation community would like to see these rules amended to fit broadly with the FAA's rules (FAR Part 91, Subpart K), which treat such operations as private, or at least to provide for the option of switching between private and public operating rules.

363. Before being disbanded, the JAA also proposed operating rules applicable to helicopters (JAR-OPS 3) and aerial work (JAR-OPS 4) and these proposals are being studied in the context of the EASA regulatory process.

(iii) *European Community*

364. The European Community adopted pan-European safety rules in 2002 (Regulation (EC) No. 2320/2002 of 16 December 2002).²⁴⁰ ECAC undertook to amend these rules and the amendment is now under consideration by a special parliamentary/Member-State conciliation committee. The main issues being considered are the size of hand luggage, the amount of liquids that can be taken on board, cost-sharing and the applicability of the new rules to small aircraft, the latter point being of particular interest to business aviation operators. Regulation (EC) No. 2320 requires screening for aircraft with less than ten tonnes of maximum take off weight or less than 20 seats in airports with a yearly average of two commercial flights per day. Several options are envisaged to lower these thresholds, but certain member States, such as the United Kingdom, are pressing for stricter rules of the kind applied under the United Kingdom's National Aviation Security Plan, which involves 100 per cent screening at London City Airport, for example.

²³⁹ For more information on the transition from the Joint Aviation Authorities to their successor, the European Aviation Safety Agency (EASA), see document S/C/W/270, page 19, paragraphs 65 to 66.

²⁴⁰ See also the reference to this regulation in the airport management section of second review document S/C/W/270 (page 118, paragraphs 415 to 417). The text of the regulation is available at the following address: http://eurlex.europa.eu/smartapi/cgi/sga_doc?smartapi!celexplus!prod!CELEXnumdoc&lg=en&numdoc=302R2320.

365. In February 2007, the European Commission published a discussion paper entitled "General Aviation in the European Community"²⁴¹, which was the subject of comments and consultations²⁴² as well as a forum held in March 2007.²⁴³ A summary of contributions to the consultations was issued on 21 May 2007.²⁴⁴

366. One of the salient features of the document is the recognition of the lack of systematic data on the general aviation sector, including safety trends. Another conclusion concerns the lack of clear definitions, the diversity of definitions and the absence of a common view of the subject among Member States.²⁴⁵

367. Another striking feature is the marginal attention devoted to market access concerns. The comments focus mainly on questions of aircraft manufacture, access to infrastructure and airspace, the impact of new aircraft types (VLJs and unmanned aerial vehicles), environmental impact and the proportionality of regulations.

368. In view of the refocusing of the second review documentation on market access issues (see document S/C/W/270, page 1, paragraph 7), these matters will not be dealt with unless Members so request.

369. The only market access issues referred to in the document concern fractional ownership, an area in which the representatives of business aviation point to the existence of an uneven playing field between the United States and the European Community on account of US rules concerning the processing of foreign air carrier permit applications. However, they also recognise that some positive developments are taking place in this area.

370. Furthermore, at the intra-Community level and in connection with the same question of fractional ownership, business aviation professionals call for the Community authorities to refrain from adopting regulations. Indeed, they take the view that the emergence of fractional ownership creates no conflict with existing definitions in respect of general aviation, and that the conclusions of the task force of the European Civil Aviation Conference on the subject of operational control, safety oversight, security and insurance, as well as the revision of the basic regulations of EASA, should be sufficient in this regard.

371. One example suggests that aerial work is largely carried out in a liberal environment. This is the case of CHC Helicopter Corporation, based in Vancouver, which was recently sold to equity investors for a price estimated at US\$1.2 billion. CHC operates 220 helicopters and two thirds of its revenue comes from servicing the oil industry. For this purpose, it maintains 17 bases in the North Sea, an area largely governed by European Community regulations or enlarged Community regulations of the European Economic Area.

(iv) *United States*

372. Specialty air services are not regulated in the United States as a transport service. They therefore escape cabotage restrictions in respect of both consecutive cabotage/cross-border traffic

²⁴¹ Available at the following address: http://ec.europa.eu/transport/air_portal/internal_market/general_aviation/doc/general_av_discussion_paper.pdf.

²⁴² An electronic version of the non-confidential comments is available from the following address: TREN-AIR-GENAV@ec.europa.eu

²⁴³ The report of the forum and the presentations made there may be consulted at the following address: http://ec.europa.eu/transport/air_portal/internal_market/general_aviation/forum_en.htm.

²⁴⁴ Available at the following address: http://ec.europa.eu/transport/air_portal/internal_market/general_aviation/doc/summary_of_contributions.pdf.

²⁴⁵ As described in the document in the following terms: "As far as the contributions from the Member States are concerned, it seems that their definitions and understanding of General Aviation differ amongst each other. Generally they stress the need for clear and uniform set of definitions but overall it is quite hard to see a clear picture emerging from the contributions submitted by Member States."

(prohibition) and investment (legislation on substantial ownership and effective control by US citizens). Foreign-registered aircraft or aircraft registered in the United States to non-citizens or non-permanent residents must undergo a reciprocity test in order to obtain an operating licence. The test takes the form of weekly publication of applications received for public comment, so as to enable US operators who might not be offered the same opportunities of access in the country of origin of the applicant to make this fact known to the US authorities for any necessary action to be taken. There was no change to this system during the period under review other than the assurance of the granting of licences to US free trade agreement partners, a point already described above in the section devoted to bilateral developments.

373. The general aviation sector, and business aviation in particular, have suffered from temporary flight restrictions and a ban on services to Washington National Airport for security reasons. A study by the HLB Decision Economics consultancy²⁴⁶ estimates losses in the sector due to security measures at US\$1.3 billion between 11 September 2001 and March 2004. The Transport Security Administration imposed a requirement for the establishment of "portal cities" through which business aircraft must pass for inspection before serving the District of Columbia. The list of portal cities has been enlarged but is still considered insufficient by professionals.

374. A specific legal regime for fractional ownership was defined in July 2003 (FAR Part 91, Subpart K). The new rules ended what was perceived by air taxi operators as a competitive disadvantage. On the one hand, they require fractional ownership operators to comply with stricter rules inspired by those applicable to commercial operators (Part 135), and on the other hand, they give more operational freedom to air taxi operators, particularly in terms of accessible runways. The new requirements relate in particular to the legal liability of fractional ownership managers, conditions of recruitment and training of pilots, working hours, maintenance and record keeping. These regulations entered into force progressively over a 15 month period.

375. The main regulatory concern of general aviation professionals in the United States relates to a domestic problem: they fear that the amount and basis of assessment of proposed airspace user fees could place them at a disadvantage in relation to commercial airlines. To date, the air navigation system has been financed by the allocation of the fuel tax to the Airport and Airway Trust Fund, an allocation which legally expires in September 2007.

²⁴⁶ Aviation Week & Space Technology, 16 October 2006.