



Australian Government

Department of Transport and Regional Services

Bureau of Transport and Regional Economics



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from the director

## Changes to Avline

Regular readers of Avline will notice some changes to the structure and presentation of this issue. All regular information has been retained, however, the information has been reordered and grouped under new headings in a continuing effort to improve data presentation and readability. There have also been refinements to some of the terminology used with the aim of increasing consistency and improving clarity.

Additional information has been included in some graphs. For example, graphs on the domestic aviation industry (figures 4 and 5) now highlight the regional airlines component; graphs on network utilisation (figures 6 and 9) now include load factors as well as seat availability; and international air freight (figure 10) now includes a breakdown by inbound and outbound freight.

Explanations of important changes are included throughout this issue. I trust you will find this new information and its presentation useful.

## Feature article

This issue's feature article examines domestic on time performance, one year after the commencement of reporting of on time data. The article explores total industry trends and some of the factors influencing the results. International comparisons are also drawn to highlight Australia's relative performance.

In future issues of Avline, Australian on time performance data will be included as a standard feature within the Domestic Industry section of the publication.

Phil Potterton  
Executive Director

## in brief

- Australian airline on time performance for 2004 averaged 88.2 per cent for departures and 87.7 per cent for arrivals (page 4).
- The combined domestic and regional aviation industry is operating at record high levels with almost 37.8 million passengers carried during the year ending December 2004, an increase of 14.0 per cent on 2003 (page 9).
- Domestic airline passenger numbers increased by 14.4 per cent over the year while regional airline passenger numbers increased by 11.1 per cent (page 10).
- International aviation into and out of Australia is also performing strongly, with record month-on-month growth in passenger numbers since November 2003 (page 13).

## internet addresses

Download this issue of Avline and back issues:  
<http://www.btre.gov.au/statistics/aviation/avline/avline.aspx>  
Bureau of Transport and Regional Economics  
home page: <http://www.btre.gov.au/index.aspx>

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## Domestic airline on time performance – the first year of reporting

### Introduction

In May 2004, issue 4 of Avline presented an analysis of the initial four months of airline on time performance data. This article revisits the subject following the completion of the first full year of reporting by Australian major domestic airlines – Qantas, QantasLink, Regional Express Skywest Airlines and Virgin Blue. Jetstar has also been reporting since beginning operations on 25 May 2004.

The purpose of collecting this information is to monitor overall industry and individual airline performance on punctuality and to allow consumers to make informed decisions when planning air travel within Australia.

As noted in the earlier article, the BTRE's on time performance collection mirrors international reporting which has been available for some time for United States and European routes. This article includes a comparison of Australian and international on time performance.

Consistent with US and European on time reporting definitions, flights departing from or arriving at the airline terminal building **within 15 minutes of the scheduled times** are considered to be on time. This is because delays of this magnitude in departure time can frequently be 'made up' by the aircraft in flight, or in the case of arrival times, readily accommodated in the passenger's arrangements with minimal inconvenience.

The method of capturing on time performance varies between airlines utilising different recording systems. Jetstar and Qantas jet aircraft use Aircraft Communication Addressing and Reporting System (ACARS) to electronically measure on time performance. Virgin Blue, Regional Express, Skywest and the Qantas non-jet fleet record on time performance manually using records from pilots, gate agents and/or ground crews.

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### Australian airline on time performance – domestic network

BTRE on time performance data covers all services operated by Australia's major airlines: Jetstar, Qantas (including QantasLink regional services), Regional Express, Skywest and Virgin Blue. These operators collectively carry over 95 per cent of Australia's airline traffic.

The BTRE's on time performance information provides data for both on time departures and arrivals. This is because there is no agreed single indicator for an on time flight. For example, Qantas measures its own on time performance using **arrival** times as its key performance indicator.

*Qantas understands the importance of getting you to your chosen destination on-time, everytime. We strive to operate every flight and meet every arrival time shown in our published schedule, and do so without compromising safety* Qantas website.

Jetstar also uses on time arrivals as its key indicator. Virgin Blue, on the other hand, uses on time **departures** as its key performance indicator.

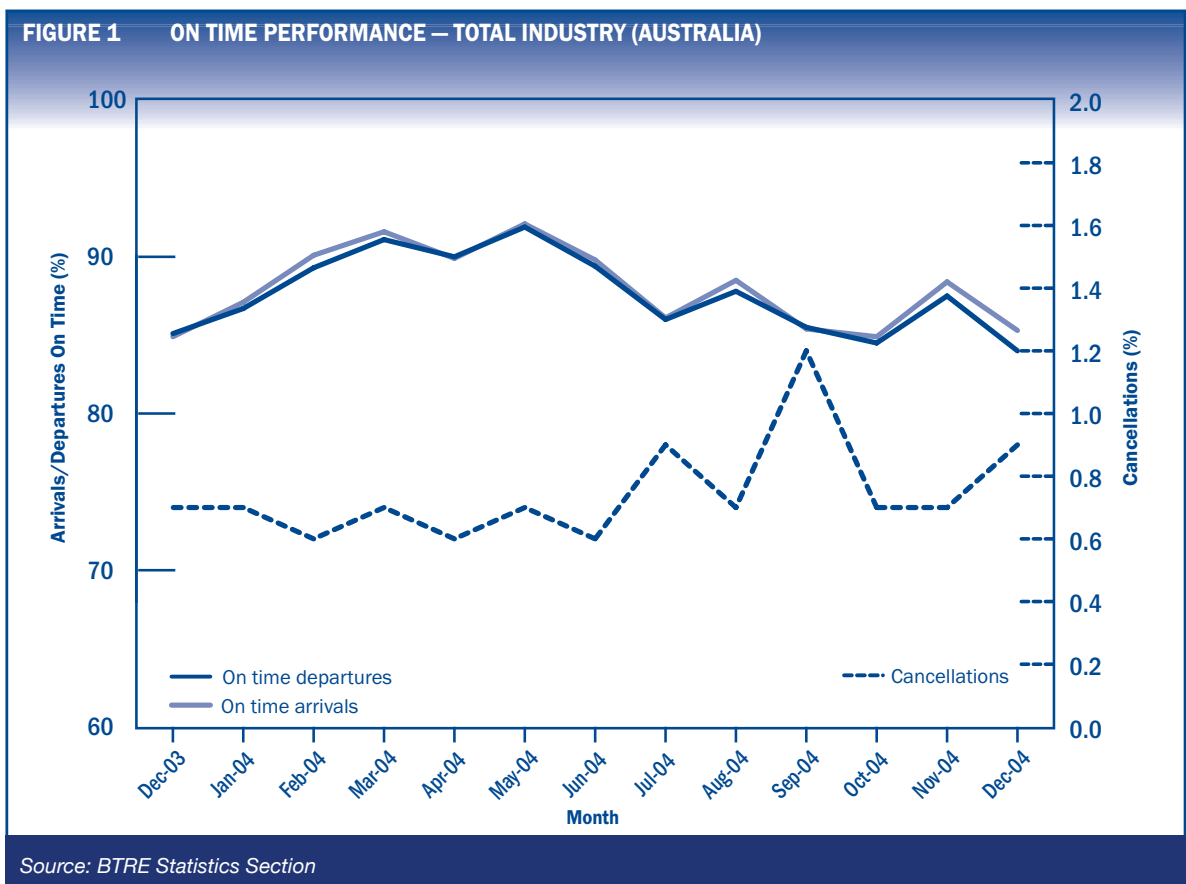
*At Virgin Blue we measure our on-time performance as all flights that depart within 15 minutes of their stated departure time* Virgin Blue website.



Obviously on time departure and arrival performance are closely related. However, the different focus between airlines is reflected to some extent in on time performance results.

For the year ending December 2004, 412,118 flights were reported and, of these, 363,462 (88.2 per cent) departed on time and 361,566 (87.7 per cent) arrived on time.

On time departures and arrivals remained at 84.0 per cent or higher each month over the year ending December 2004 (figure 1). On time performance peaked in May: 92.1 per cent for departures and 91.9 per cent for arrivals. Not surprisingly, the lowest performing months were the busiest months measured by the number of flights, with on time departures lowest in October 2004 (84.9 per cent) and on time arrivals lowest in December 2004 (84.0 per cent).



Cancellations were lowest in February with less than 0.6 per cent of all scheduled services cancelled, and peaked in September at 1.2 per cent. Over the full year, 415,235 sectors were scheduled, with 3,171 (0.8 per cent) flights cancelled.



## Australian on time performance by airline and airport

Table 1 summarises on time performance on all routes operated by participating airlines for the year to December 2004.

TABLE 1 AUSTRALIAN ON TIME PERFORMANCE – TOTAL INDUSTRY, 2004							
	Jetstar	Qantas	Qantas Link	Regional Express	Skywest	Virgin Blue	All Airlines
Sectors Scheduled	24 439	123 127	107 497	54 782	9 973	95 417	415 235
Sectors Flown	24 199	122 127	106 540	54 675	9 952	94 625	412 118
On Time Departures	21 220	106 657	94 797	48 959	9 285	82 544	363 462
On Time Arrivals	21 537	108 069	92 476	48 456	9 295	81 733	361 566
Cancellations	234	1 000	957	133	21	792	3 137
On Time Departures (%)	87.7%	87.3%	89.0%	89.5%	93.3%	87.2%	88.2%
On Time Arrivals (%)	89.0%	88.5%	86.8%	88.6%	93.4%	86.4%	87.7%
Cancellations (%)	1.0%	0.8%	0.9%	0.2%	0.2%	0.8%	0.8%

Notes: 'On time departures' refer to flights that depart within 15 minutes of the scheduled departure time.  
 'On time arrivals' refer to flights that arrive within 15 minutes of the scheduled arrival time.  
 'Cancellations' refer to flights cancelled or rescheduled within 7 days of the scheduled departure time.

Source: BTRE Statistics Section

The highest on time performance levels for the year were achieved by Western Australian operator Skywest, with 93.3 per cent of its departures on time and 93.4 per cent of its arrivals on time. Skywest also recorded the lowest level of cancellations at 0.21 per cent, followed by Regional Express with 0.24 per cent of flights cancelled.

The performance of regional airlines was also reflected in the performance at regional airports with the best performance in 2004 in terms of on time departures at Devonport with 92.1 per cent of its 2,195 flights on time, followed by Mackay with 91.6 per cent of its 2,082 flights and Rockhampton with 91.4 per cent of its 2,095 flights departing on time. In terms of arrivals, Mackay Airport achieved 92.8 per cent, followed by Kalgoorlie with 91.8 per cent of 1,420 flights arriving on time and Proserpine with 91.8 per cent of 475 flights.

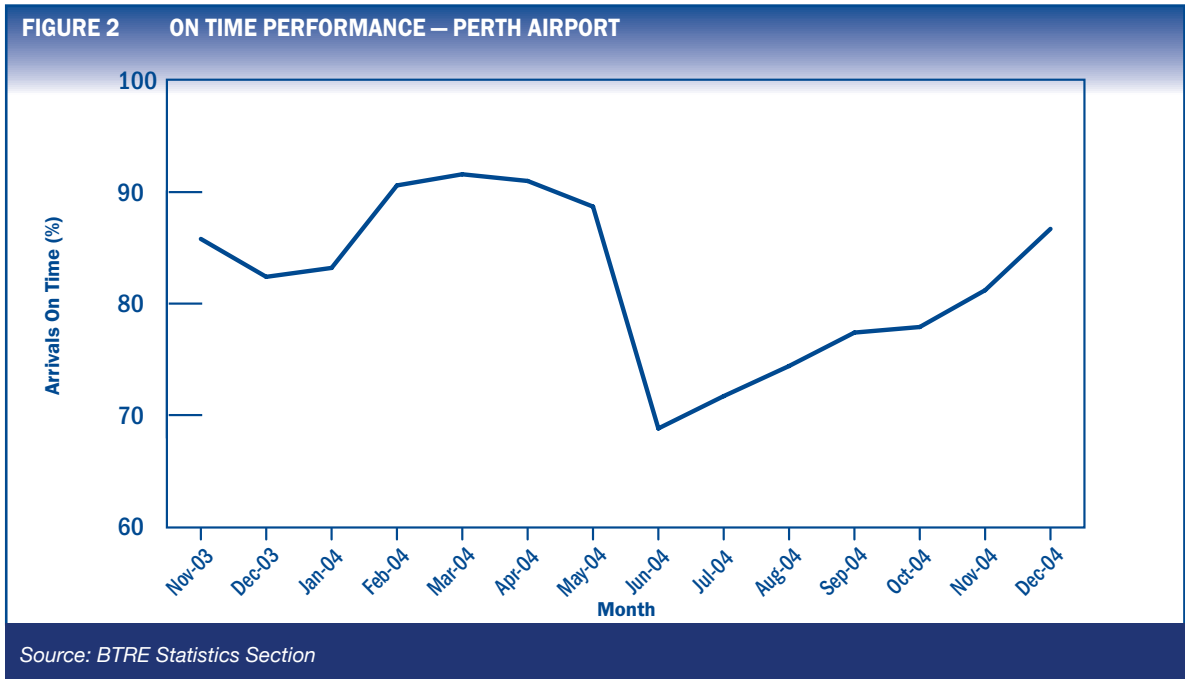
## Reasons for delays

Airline delays can occur for a variety of reasons including bad weather, airport congestion, equipment failure, unscheduled aircraft maintenance, crew shortages and industrial action.

Inclement weather is an important factor outside the control of airlines which can impact on time performance. Weather impacts include fog, storms, and excessive winds, and may affect in-flight operating conditions (increasing flight times) as well as conditions at airports. In the United States, where data is available for cause of delay, around one-third of delays during 2004 were related to adverse weather conditions.

An example of the impacts of in-flight weather conditions on on time performance can be seen in the on time arrival figures for Perth Airport during the winter months. Strong westerly winds in June and July severely impacted both Qantas' and Virgin Blue's ability to achieve on time arrivals at Perth Airport, though the on time departure performance for these flights was far superior. Perth Airport's on time arrivals dipped to 68.8 per cent in June 2004 and remained lower than average for the months of July and August (figure 2).





The effect of local storm activity on airport operations is more obvious, an example of which could be seen on 8 December 2004 when nine planes were damaged and grounded at Sydney Airport due to a serious hailstorm. Situations such as this not only have a direct impact on Sydney Airport performance but a consequential or flow-on effect to other airports where those aircraft are scheduled for services.

The controlled departure system administered by Airservices Australia prevents aircraft taking off from departure airports when the scheduled destination airport is closed or otherwise not able to accept incoming services. In the above example, this would mean that aircraft would be delayed from departing at other ports due to weather conditions at Sydney. Flights would obviously also be delayed in this instance from their inability to take off from Sydney to other ports. Impacts of morning flight delays can be particularly serious as it may mean that numerous consequential flights are affected throughout the day.

Sydney, Australia’s biggest airport, is particularly vulnerable as flight delays there typically affect greater numbers of flights than delays originating from smaller ports. The ability to recover schedules later in the day may also be restricted due to the tight scheduling necessary at such a busy airport.

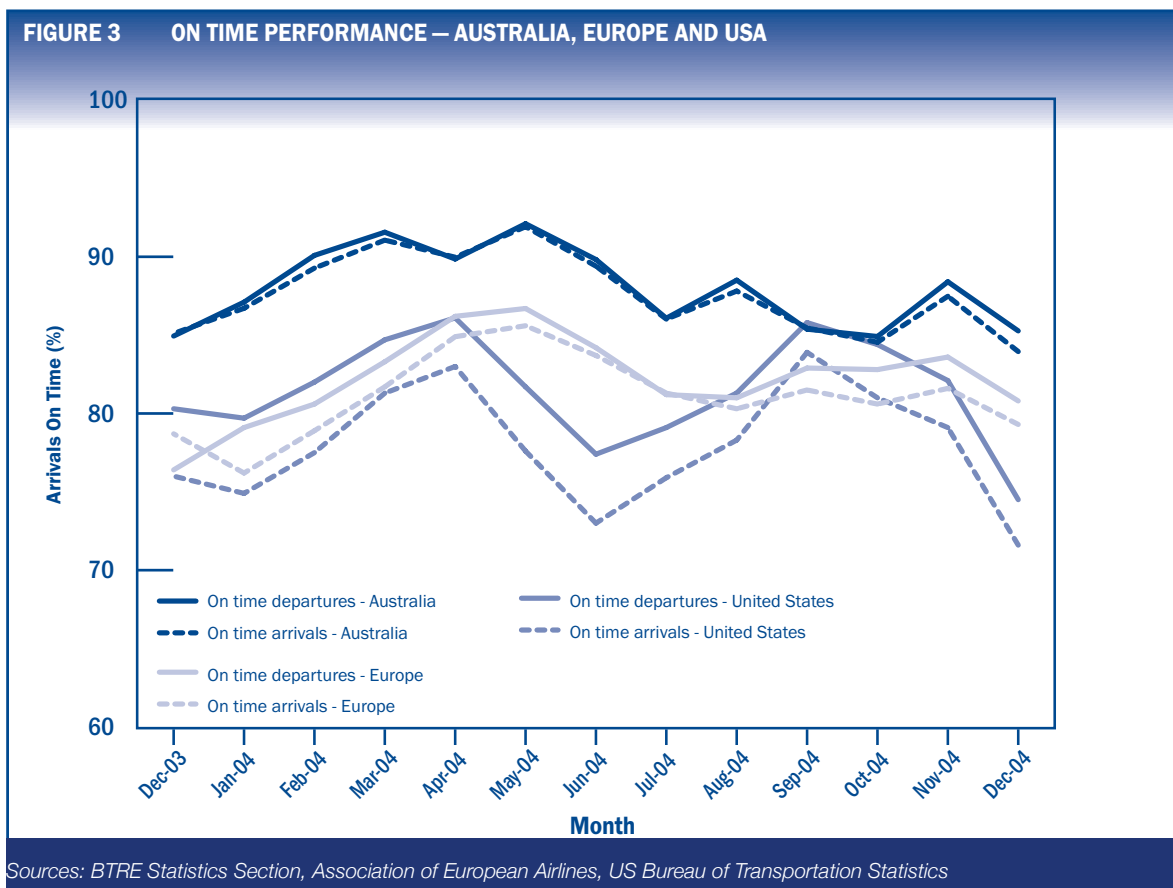
The implications of delays on point-to-point operations, where flights “shuttle” between the same two ports are different to delays experienced on network-type operations, where flights to other destinations are also affected. Network airline operations are complex, and airlines must carefully manage the flow-on effects of delays in one service across a number of ports.

Australia benefits by having relatively low levels of airspace congestion compared to more densely populated countries. For example, in the United States, with a population 15 times that of Australia, 9.9 million domestic flights operated in 2004, compared to around 510,000 in Australia. However, with over 80 per cent of Australia’s population concentrated in the Eastern states, the air space over Western and Central Australia is less busy and airlines concentrating their operations in these areas will experience fewer congestion-related problems in meeting on time performance targets.



### International comparison

In terms of on time departures and arrivals, Australia's performance compares favourably with that of Europe and the United States. This is not surprising; as noted above, volumes of air traffic are significantly less in Australia than the United States, and also in Europe. Australian on time performance reporting covered approximately 415 000 flights during 2004, whereas United States reporting covered over 7 million flights and Europe an estimated 2 million flights. Australia is also less vulnerable to extreme winter weather conditions.



Australia's monthly performance for on time departures ranged from 84.9 to 92.1 per cent for the year, compared to a range of 76.4 to 86.7 per cent for Europe and 74.5 to 86.1 per cent for the United States (figure 3). The range for on time arrivals was similar. Annual averages for on time arrivals were 87.7 per cent for Australia, 81.3 per cent for Europe and 78.1 per cent for the United States.

**TABLE 2 FLIGHT CANCELLATIONS - AUSTRALIA AND USA - 2004**

	Australia	United States
Sectors scheduled	415 235	7 129 270
Cancellations	3 137	127 757
Cancellations (%)	0.8%	1.8%

Sources: BTRE Statistics Section; US Bureau of Transportation Statistics

Australia's annual cancellation rate of 0.8 per cent compares favourably with the United States cancellation rate of 1.8 per cent (table 2). Cancellation data is not available for Europe.



## **Conclusion**

While the relative size and operating conditions of the different countries cannot be ignored, Australia's aviation industry compared favourably with international benchmarks during 2004. Within the Australian industry, there was some variation in performance between airlines, although some of this can be explained by the nature of the airlines' operations. Regional airlines and airports often performed better in terms of on time departure performance.

Though data on the reasons for delay is not available in Australia, United States data indicates that a significant proportion of airline delays is beyond the control of individual airlines. Delay factors include weather, airport congestion, airspace management, security requirements and industrial action.

The collection and publication of on time performance statistics performs an important role in monitoring one aspect of service quality in Australia's aviation services. BTRE is grateful for the co-operation of Australia's major domestic airlines in providing monthly on time performance data to continue this important monitoring function.

On time performance data will be included as a regular feature in the Domestic Industry section of future editions of Avline.

## **For further information**

On time performance data is updated monthly on the BTRE web site at [http://www.btre.gov.au/statistics/aviation/otp\\_month.aspx](http://www.btre.gov.au/statistics/aviation/otp_month.aspx)

Monthly and annual reports are available including detailed data by city pair and by airport.

## **References**

Association of European Airlines, *AEA Consumer Reports* (by month), [http://www.aea.be/AEAWebsite/Presentation\\_Tier/Pr\\_PressReleases.aspx](http://www.aea.be/AEAWebsite/Presentation_Tier/Pr_PressReleases.aspx)

Bureau of Transportation Statistics (United States), *Table 2 - Ranking of Airline On time performance by month since 1995*, [http://www.bts.gov/programs/airline\\_information/airline\\_ontime\\_tables/2004\\_12/excel/table\\_02.xls](http://www.bts.gov/programs/airline_information/airline_ontime_tables/2004_12/excel/table_02.xls) and *On Time Performance – Flight Delays at a Glance* [http://www.transtats.bts.gov/HomeDrillChart.asp?URL\\_SelectMonth=12&URL\\_SelectYear=2004](http://www.transtats.bts.gov/HomeDrillChart.asp?URL_SelectMonth=12&URL_SelectYear=2004)

Qantas, *On-Time Performance*, <http://www.qantas.com.au/info/flightInfo/onTimePerformance>

Virgin Blue, *On-Time Performance*, [http://www.virginblue.com.au/about\\_us/otp/](http://www.virginblue.com.au/about_us/otp/)





## Domestic industry

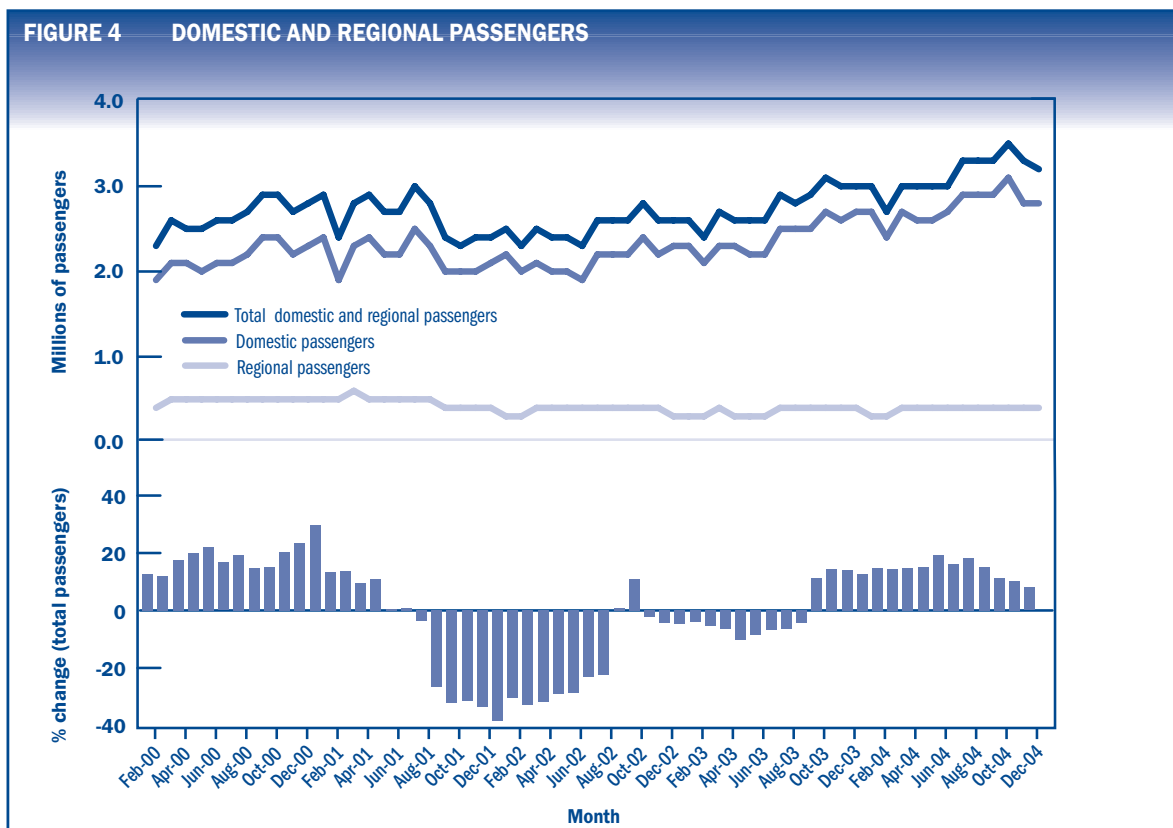
### Domestic and regional passengers

Domestic airlines are those primarily operating jet aircraft between capital cities and major tourist centres. Currently there are three domestic airlines – Qantas, Jetstar and Virgin Blue.

Regional airlines are those primarily servicing regional centres. This covers the major regional carriers such as Regional Express, Eastern Australian Airlines, Sunstate Airlines, Skywest and approximately twenty-five other smaller carriers that perform regular public transport services to regional centres.

Australia's domestic airline industry has continued to operate at record high levels in recent months. Since March 2004, the combined total of domestic and regional passenger numbers has equalled or exceeded the pre-Ansett collapse record of 2.95 million passengers in July 2001. Passenger numbers peaked at 3.5 million in October 2004, 11.3 per cent higher than October 2003 (see figure 4).

Almost 37.8 million domestic and regional passengers were carried during the twelve months ending December 2004, an increase of 14.0 per cent over 2003.



Notes: This graph replaces Figure 2 presented in previous issues of Avline.  
Regional data component includes BTRE estimates.  
Growth rates are calculated over the same month in the previous year.

Source: BTRE Statistics Section.



The domestic airline passenger component was 33.1 million (87.7 per cent of the total) for the year ending December 2004. This represented an increase of 14.4 per cent over the 28.9 million domestic passengers carried in 2003.

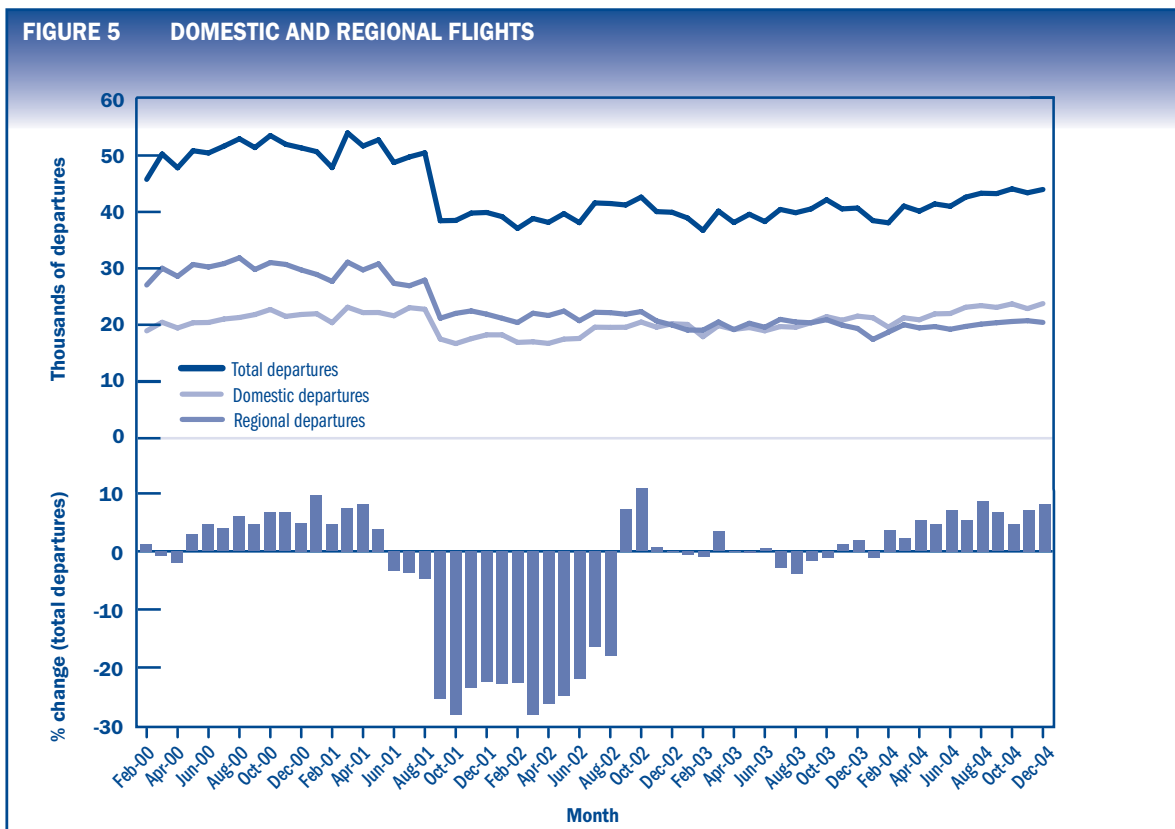
Regional airline passengers numbered 4.6 million over the same period (constituting 12.3 per cent of the total), representing an increase of 11.1 per cent over the 4.2 million passengers carried in 2003.

### Domestic and regional flights

Figure 5 shows the number of domestic and regional flights (measured in departures).

During the past year, the combined total of domestic and regional flights peaked at 44,200 in October 2004. This was 12.9 per cent lower than the 50,600 flights operated in August 2001 (immediately prior to the Ansett collapse). However, the months September through to December 2004 were the four busiest on record since the low point of 38,500 flights in September 2001.

For the year ending December 2004, a total of 501,700 domestic and regional flights was recorded. This represents an increase of 5.2 per cent on the year ending December 2003. Of these, 266,100 were operated by domestic airlines, an increase of 11.8 per cent on the number of domestic airline flights in 2003. The remaining 235,500 flights were operated by regional airlines, a decrease of 1.3 per cent on regional airline flights in 2003.



Notes: This graph replaces Figure 6 presented in previous issues of Avline. Regional data component includes BTRE estimates. Data is now shown in raw numbers (thousands of departures) rather than an index. Growth rates are calculated over the same month in the previous year.

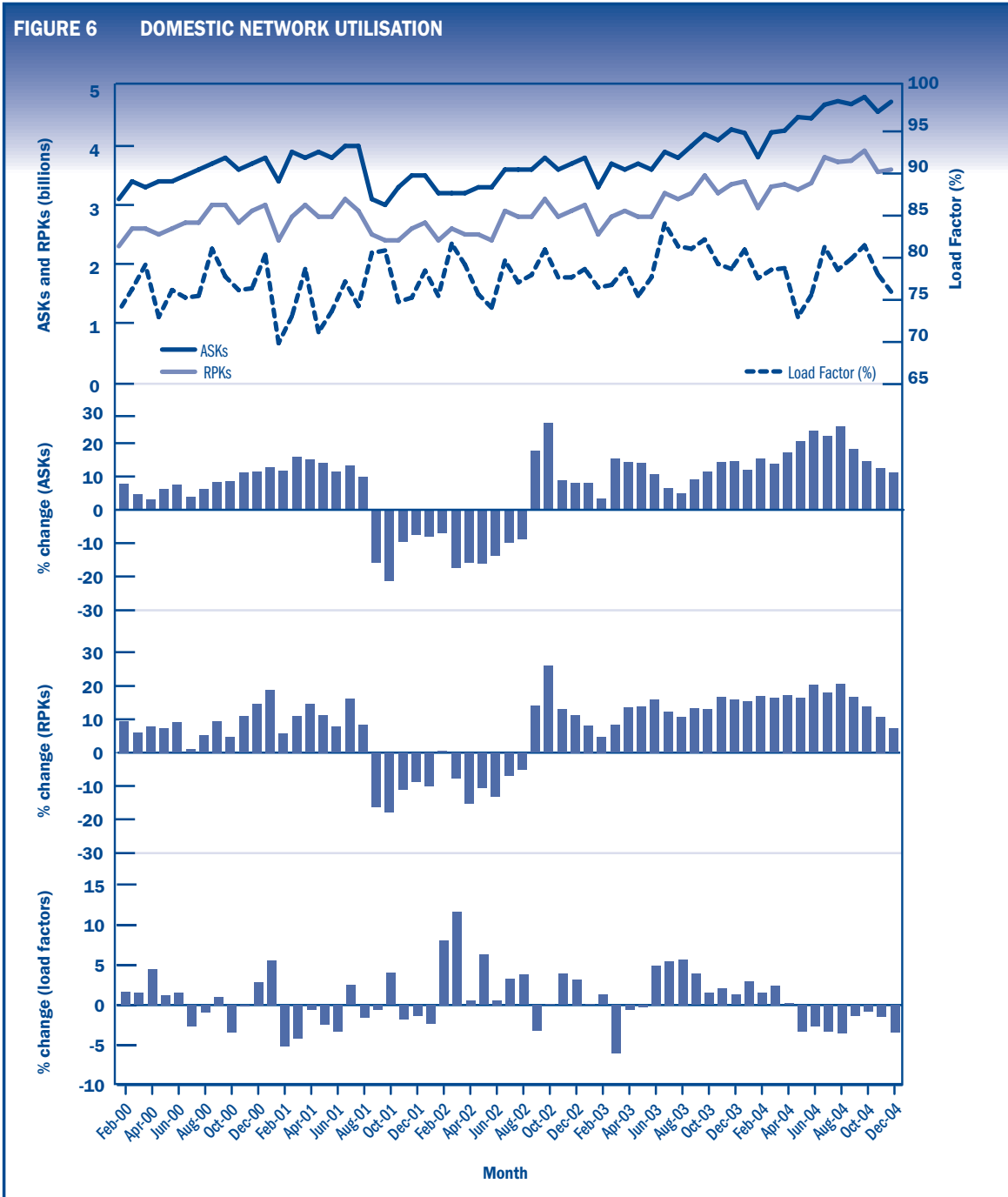
Source: BTRE Statistics Section.



### Domestic network utilisation

Combined regional and domestic capacity, measured in available seat kilometres (ASKs), achieved a new record of 4.83 billion ASKs in October 2004, 20.2 per cent higher than the pre-Ansett collapse record achieved in July 2001 (figure 6).

Revenue Passenger Kilometres (RPKs) also peaked in October 2004 with a record 3.92 billion performed. This was 27.1 per cent higher than July 2001 indicating the increased number of passengers being carried on longer-haul direct services over this period.



Notes: This graph incorporates Figure 5 presented in previous issues of Avline. Includes all regional operations. ASKs refers to Available Seat Kilometres. RPKs refers to Revenue Passenger Kilometres. Data is now shown in raw numbers (billions of ASKs and RPKs) rather than an index. Growth rates are calculated over the same month in the previous year.

Source: BTRE Statistics Section.



For the year ending December 2004, ASKs were 17.0 per cent higher than the same period in 2003 while RPKs were up 15.6 per cent on 2003.

Load factors dropped to a low of 72.7 per cent in May 2004 immediately prior to the introduction of services by Jetstar. Both low cost airlines, Jetstar and Virgin Blue, offered substantial discounts in June and it is likely that May load factors reflect passengers that deferred travel to take advantage of these low fares. Over the twelve months to December 2004, load factors were highest in October at 81.2 per cent, but averaged 78.1 per cent over the year.

In the latter half of 2004, load factors were down on the corresponding period for 2003, indicating that demand has not yet caught up with the high levels of capacity. Growth is therefore expected to slow over the next twelve months.

### **Domestic air freight**

Information on domestic air freight has been discontinued due to difficulties securing data and the coverage of data. BTRE is working with air freight operators to attempt to resolve these problems.



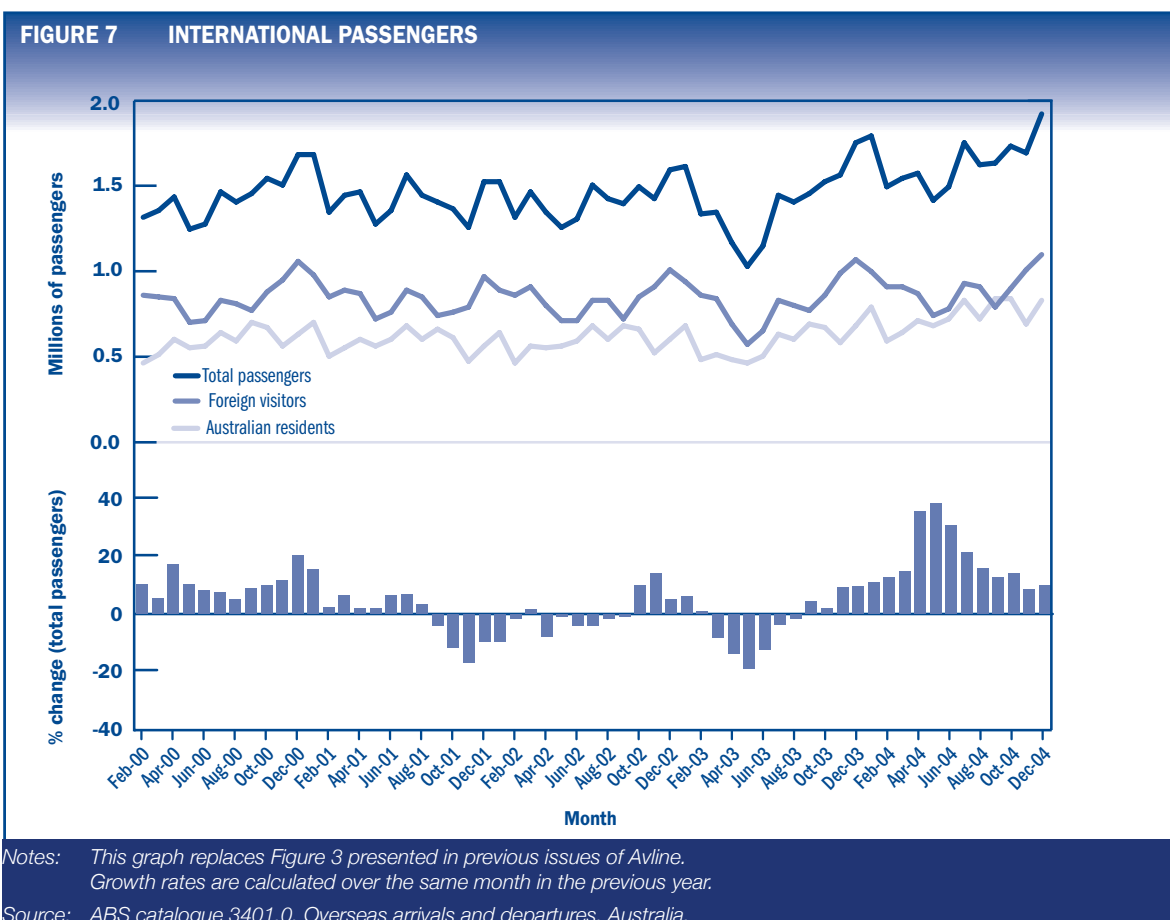
## International industry

### International passengers

Passenger traffic on Australian international flights has grown strongly over the past twelve months. December 2004 saw a record high of 1.93 million international passengers (figure 7). This was an increase of 9.8 per cent on December 2003. Growth has been consistently strong through 2004, with particularly strong growth mid year, recovering from the impact of the SARS crisis in 2003.

Significantly, in September 2004, the number of Australian resident passengers (0.84 million) exceeded the number of overseas visitors (0.79 million).

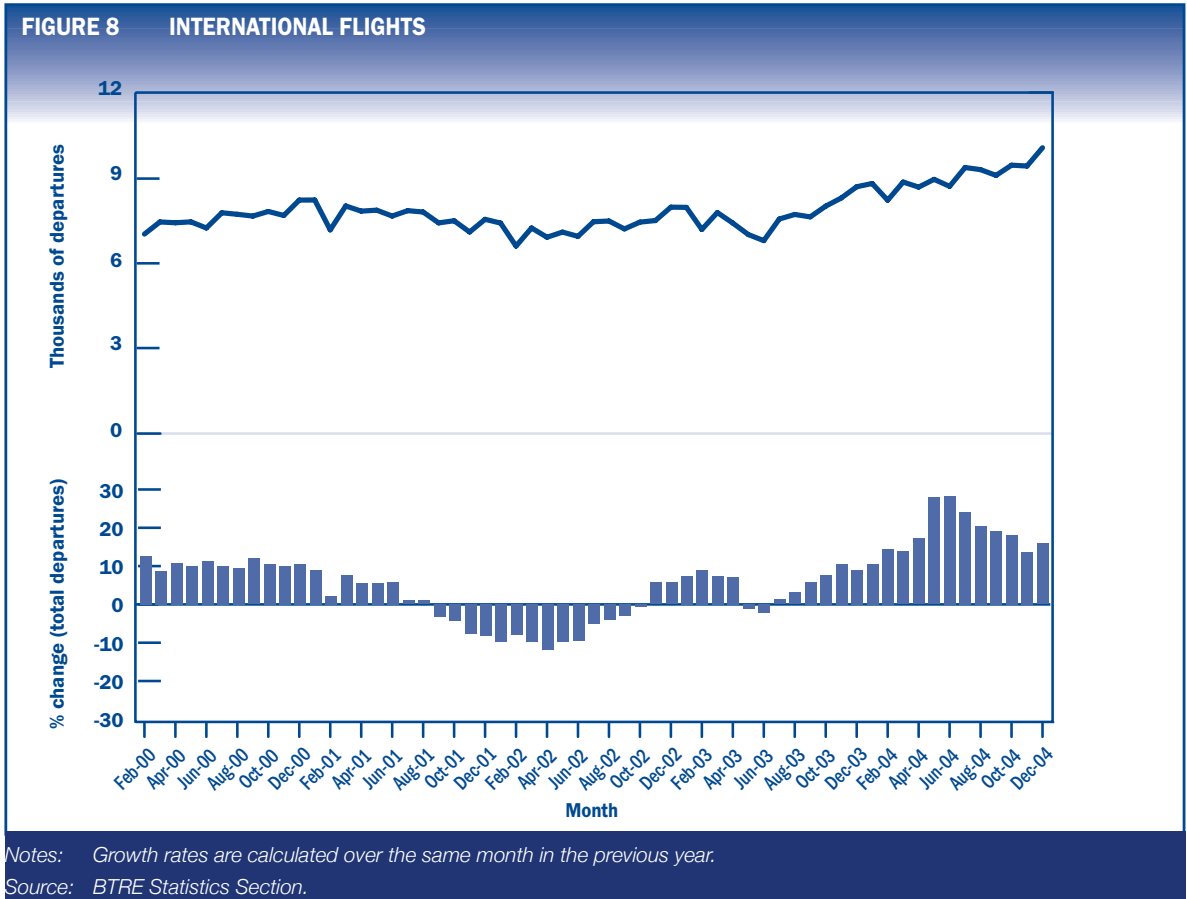
Growth of international passenger traffic was driven by the increase in the number of Australian residents travelling on international flights, 27.9 per cent up on 2003. The number of overseas visitors in 2004 increased by 9.9 per cent over 2003 levels. For the year ending December 2004, the total number of international passengers was 19.7 million, an increase of 17.3 per cent on the previous year.



### International flights

International activity reached a record high of 10,000 flights in December 2004 (figure 8). This was 15.9 per cent higher than December 2003 and 48.4 per cent higher than the low of 6,800 flights recorded in June 2003 when activity was negatively impacted by SARS.

For the year ending December 2004, 109,000 flights were conducted, representing record annual growth of 18.4 per cent.

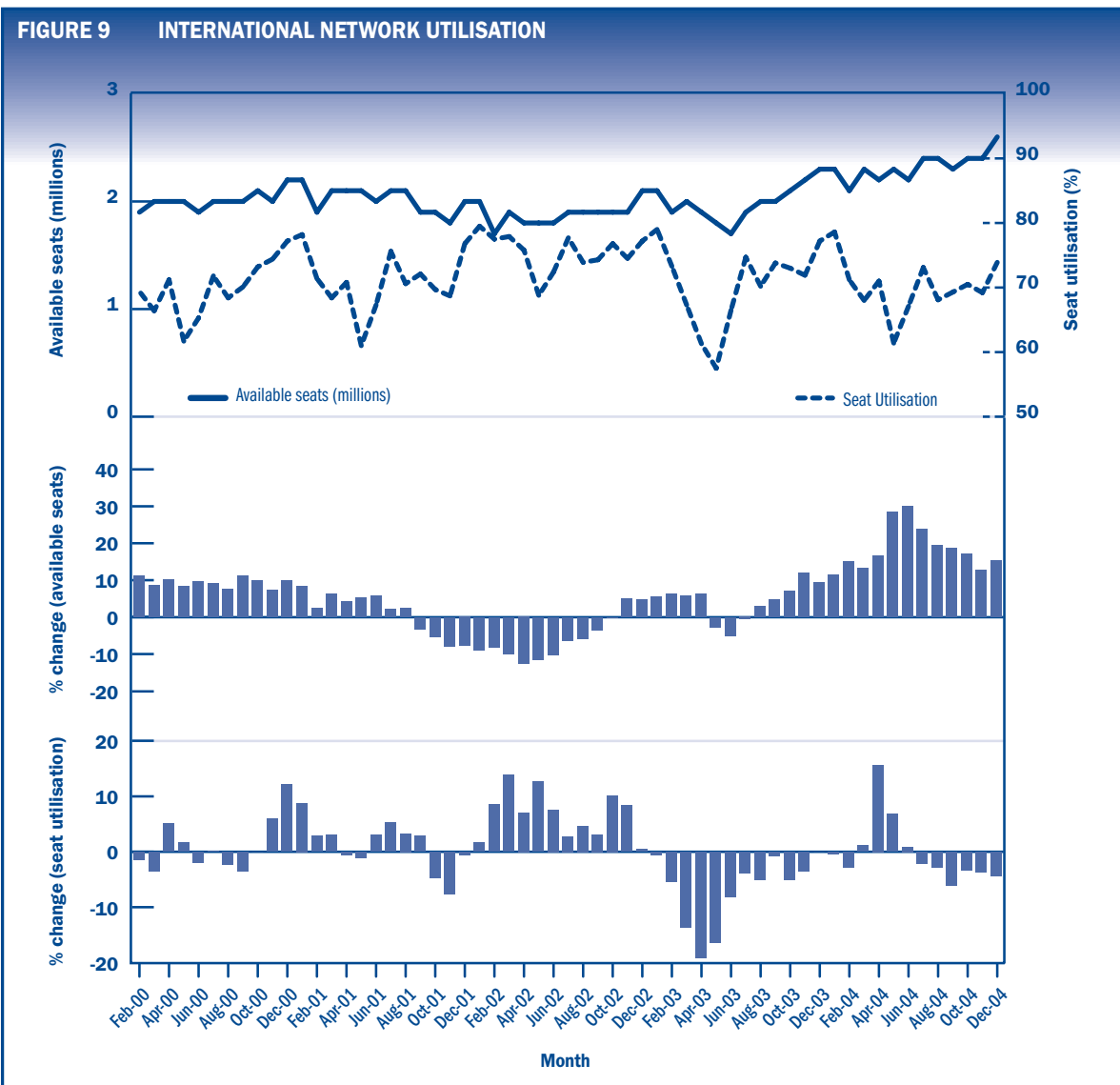


### International network utilisation

International airline capacity (measured in available seats) remained at high levels over the last six months of 2004, peaking at a record 2.63 million seats in December 2004 (figure 9).

For the year ending December 2004, available seats numbered 28.1 million, an increase of 18.2 per cent on the previous year.

Seat utilisation (shown as an average of inbound and outbound seats) reached a high of 78.6 per cent in January 2004 and dropped to a low of 61.4 per cent in May 2004, but averaged 70.2 per cent over the year.



Notes: This graph incorporates Figure 4 presented in previous issues of Avline. Available seats is a total of inbound and outbound seats (in millions). Seat utilisation is an average of inbound and outbound seat utilisation (%). Available seats data is now shown in raw numbers (millions of available seats) rather than an index. Growth rates are calculated over the same month in the previous year.

Source: BTRE Statistics Section.

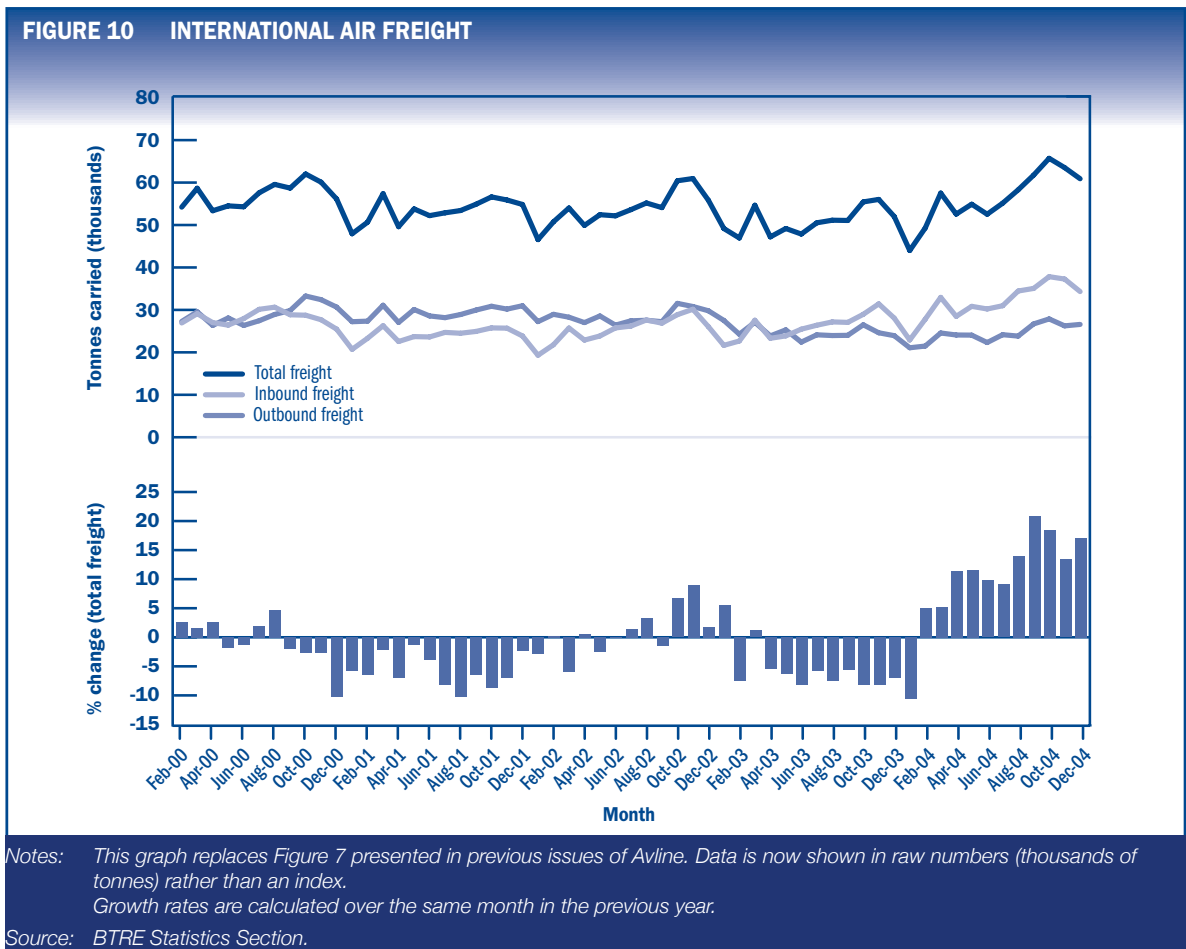


### International air freight

Air freight carried on Australian international flights (in thousands of tonnes) is presented in figure 10. In October 2004, a record 65.7 thousand tonnes was carried, representing an increase of 18.5 per cent on October 2003.

This total comprised 37.8 thousand tonnes (58.7 per cent) inbound and 26.2 thousand tonnes (41.3 per cent) outbound freight. Inbound freight increased by 18.6 per cent over October 2003, while outbound freight increased by 6.6 per cent over the same period.

Inbound air freight has continued to exceed outbound air freight over the past eighteen months. The 383.1 thousand tonnes of inbound freight carried over the twelve months ending December 2004 was 22.2 per cent higher than 2003, while the 293.0 thousand tonnes of outbound freight for the year ending December 2004 represented a decrease of 1.6 per cent. Total freight increased by 10.6 per cent over the same period.





## Airport activity

### Airport activity levels

Table 3 summarises passenger and aircraft movements at the five major Australian airports for the last three calendar years.

For the year ending December 2004, all airports recorded double-digit growth in total passenger traffic when compared to 2003. Brisbane Airport recorded the strongest growth at 17.3 per cent, followed by Melbourne (14.5 per cent), Perth (13.7 per cent), Adelaide (11.6 per cent) and Sydney (10.9 per cent).

In terms of total RPT aircraft movements, Brisbane Airport had the strongest growth (at 11.9 per cent) with the strong increases in capacity of Virgin Blue and Jetstar. Aircraft movements were also high at Melbourne Airport with an increase of 11.5 per cent over 2003.

Growth was particularly strong in the international sector for all airports. For example, international passenger traffic at Adelaide Airport increased by 38.3 per cent over 2003 compared to a decrease

**TABLE 3 ACTIVITY AT MAJOR AUSTRALIAN AIRPORTS**

Airport	Year	Passenger movements (millions)				Aircraft movements (thousands)				
		Inter-national	Domestic	Regional	Total	Inter-national	Domestic	Regional	Sub total	Total*
Sydney	2004	8.9	16.5	1.8	27.1	56.1	117.9	72.4	246.3	276.8
	2003	7.9	15.0	1.6	24.5	49.1	107.1	72.1	228.3	258.2
	2002	8.0	13.6	1.6	23.2	46.5	100.6	74.4	221.5	252.5
Melbourne	2004	3.9	15.2	0.6	19.7	26.7	112.5	25.6	164.8	175.0
	2003	3.2	13.5	0.5	17.2	21.3	101.4	25.0	147.8	158.6
	2002	3.3	12.3	0.5	16.2	21.5	96.0	27.2	144.6	155.5
Brisbane	2004	3.3	10.9	0.7	14.8	21.0	85.9	22.8	129.7	155.6
	2003	2.6	9.5	0.6	12.7	16.7	77.4	21.8	115.9	139.8
	2002	2.5	8.4	0.7	11.7	17.4	73.1	29.3	119.8	145.9
Perth	2004	1.8	4.1	0.3	6.2	9.5	34.0	9.0	52.5	96.5
	2003	1.6	3.7	0.2	5.5	8.8	32.4	8.4	49.6	94.0
	2002	1.6	3.2	0.2	5.0	8.3	28.8	8.0	45.1	91.9
Adelaide	2004	0.3	4.5	0.4	5.1	2.0	37.3	28.8	68.1	103.2
	2003	0.2	4.1	0.3	4.6	1.8	35.4	28.0	65.2	101.4
	2002	0.2	3.7	0.3	4.2	1.7	35.1	29.4	66.2	103.5

Notes: This replaces Table 1 in the previous issue of Avline and now presents data for twelve- rather than six-month periods. International passenger data are the total passengers uplifted and discharged within a flight. This data is provisional. Domestic and regional passenger data are the total passengers on board (POB) by flight stage. The regional component is provisional and includes BTRE estimates. International, domestic and regional data represents Regular Public Transport operations. Total\* includes military and unscheduled aircraft. Aircraft movements recorded during the hours in which Airservices Australia provides a tower service.

Sources: BTRE Statistics Section; Airservices Australia monthly aircraft movements at Australian Airports ([www.airservicesaustralia.com](http://www.airservicesaustralia.com)).



of 7.8 per cent between 2002 and 2003. International passenger activity at Brisbane Airport increased by 28.1 per cent over 2003 compared to 2.3 per cent between 2002 and 2003.

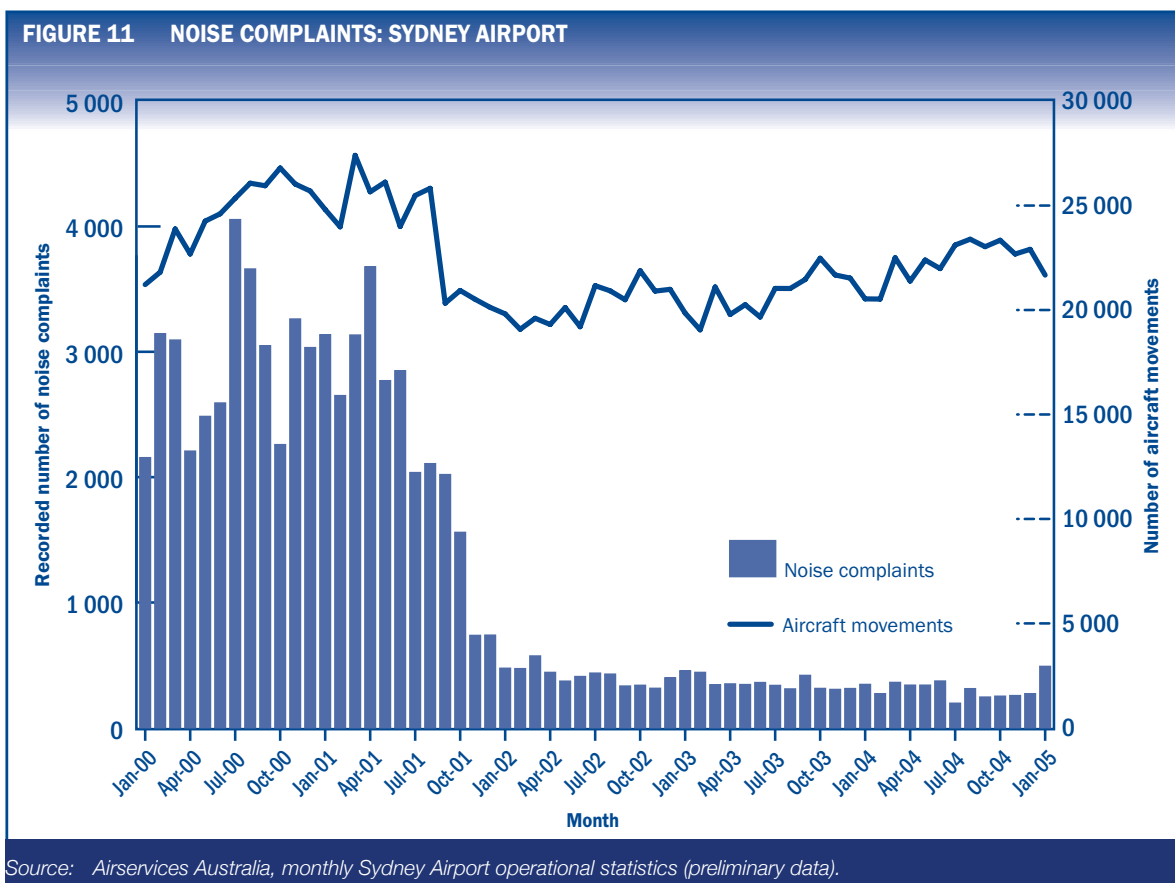
International aircraft movements showed the highest growth at Brisbane Airport where an increase of 25.9 per cent over 2003 was recorded.

### Sydney aircraft noise

There were 491 noise complaints recorded at Sydney Airport in January 2005 (figure 11), an increase of 41.5 per cent on the 347 complaints recorded in January 2004. This is despite the 21,672 aircraft movements in January 2005 being only 5.5 per cent higher than the number recorded in January 2004.

In August 2004 – the busiest month for Sydney Airport over the past year (with 23,389 aircraft movements) – the number of noise complaints was a comparatively lower figure of 313.

For the twelve months ending January 2005, noise complaints totalled 3,723, a decrease of 11.3 per cent over the previous twelve months. Over the same period, there were 268,913 aircraft movements, an increase of 7.7 per cent on the previous twelve months.



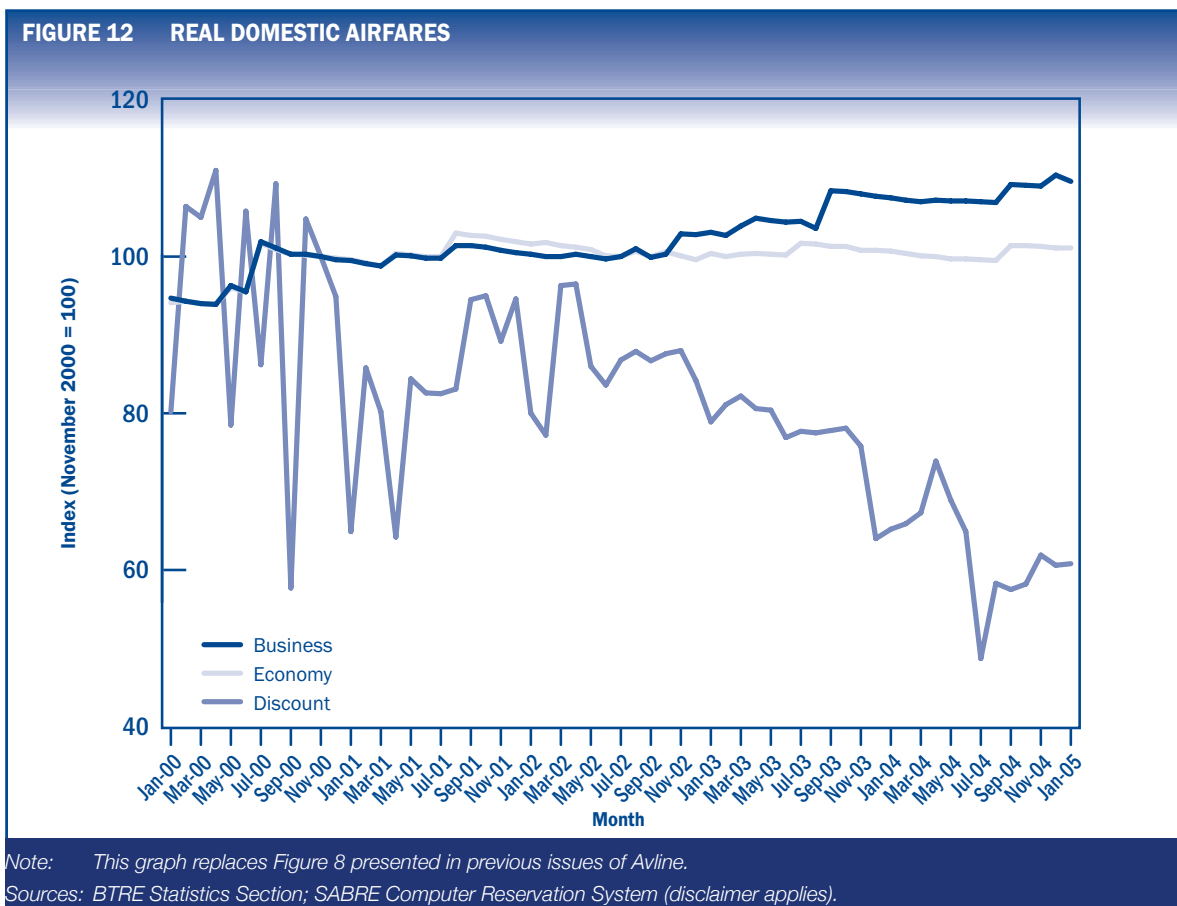
## Economic indicators

### Real domestic air fares

The real domestic air fares indexes (shown in figure 12) include those taxes and charges that are collected as part of the airfare (security, certain airport charges and GST). The indexes – based on the lowest business, economy and discount air fares available through the Sabre Pacific Computer Reservation System – provide a measure of changes to air fares over time.

The most notable changes in air fares occurred in relation to discount fares. The Discount Fare Index achieved a record low of 48.7 in July 2004, 37.3 per cent lower than July 2003 with the commencement of services by low cost airline Jetstar and subsequent substantial discounts offered by both Jetstar and Virgin Blue. The Economy Fare Index decreased by only 2.0 per cent over the same period, while the Business Class Index increased by 2.5 per cent.

The Economy Fare Index has continued to remain relatively steady over recent months and in January 2005 was only 0.4 per cent lower than January 2004 levels. The Business Fare Index increased by 1.9 per cent, while the Discount Fare Index decreased by 6.8 per cent over the same period.

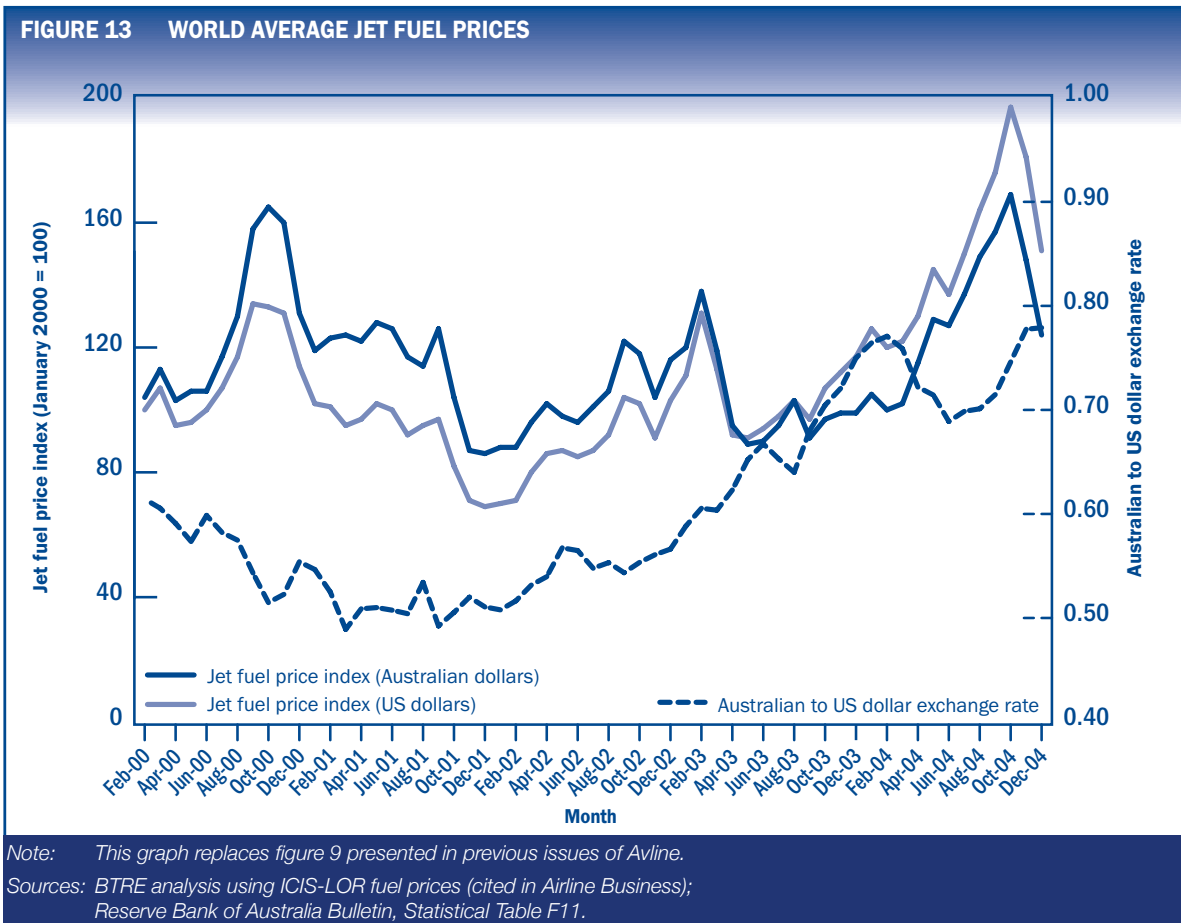


### Jet fuel prices

Aviation jet fuel costs peaked dramatically in October 2004 (figure 13). The jet fuel price index in US dollars at this time was 197, an increase of 84.2 per cent on October 2003. In Australian dollar terms, the index reached 169 which was 74.0 per cent higher than October 2003.

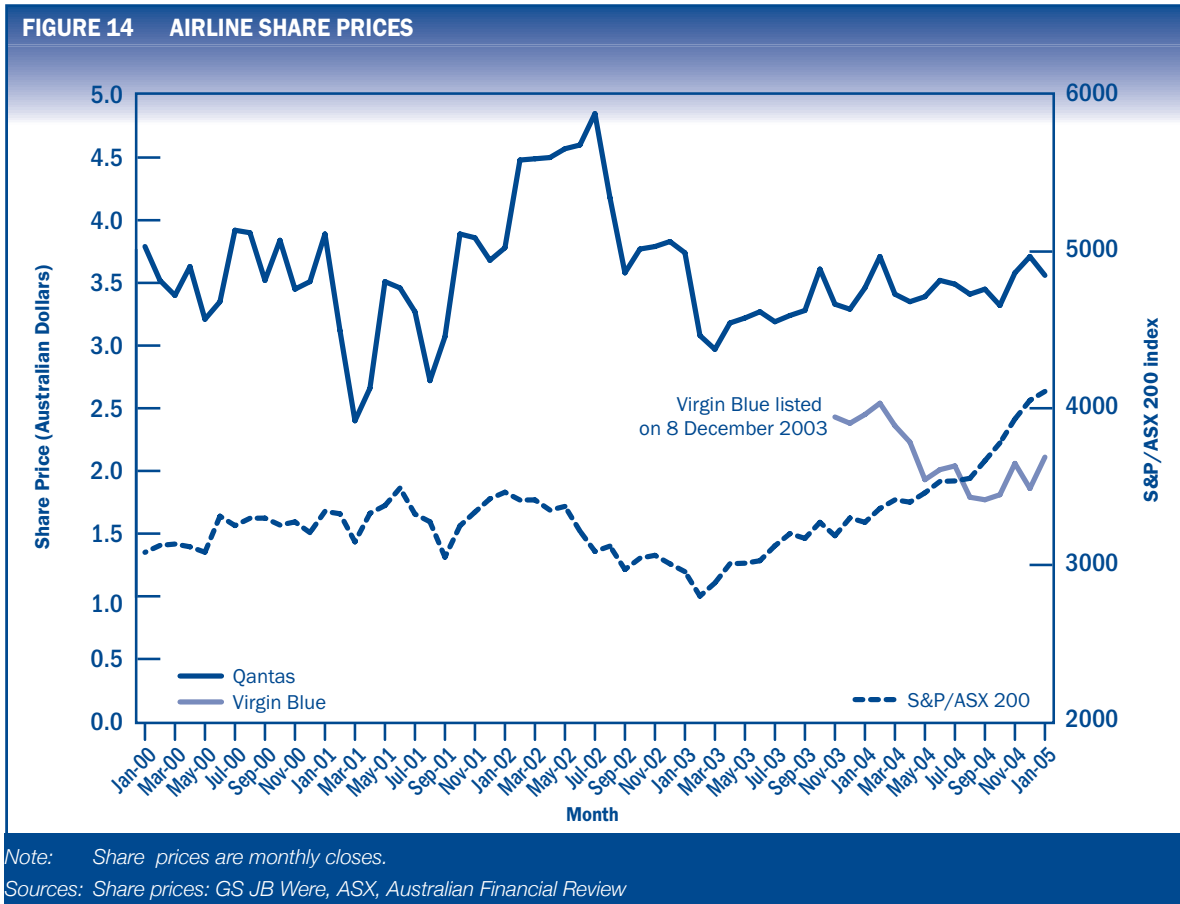
More consistent levels were reached by December 2004 – 151 for US dollars and 124 for Australian dollars. These reflected increases of 29.0 per cent and 24.2 per cent, respectively, over December 2003.

The trend toward higher fuel prices, as well as the corresponding introduction of fuel surcharges by Qantas and Virgin Blue, was noted in Issue 5 of Avline.



**Airline share prices**

Figure 14 shows the end of month closing prices for Qantas, Virgin Blue and the S&P/ASX 200 Index.



Virgin Blue's share price fell to \$1.77 per share in September 2004, 25.6 per cent down on the closing price for the first month of trading in December 2003. By January 2005, the closing price for the month was \$2.11 per share, down 13.9 per cent on January 2004.

The Qantas share price reached a high of \$3.71 per share in both February and December 2004. In January 2005, Qantas shares closed at \$3.56, up 2.9 per cent on January 2004.

Qantas reported a pre-tax profit of \$601.3 million for the six months ending 31 December 2004. This was a 13.4 per cent increase over the same period in 2003. The \$458.4 million after-tax profit to December 2004 was 28.1 per cent higher than the same period in 2003.

Virgin Blue reported a pre-tax profit of \$90 million for the six months ending September 2004. Its after-tax profit for the same period was 63.0 million, down 1.8 per cent on 2003.

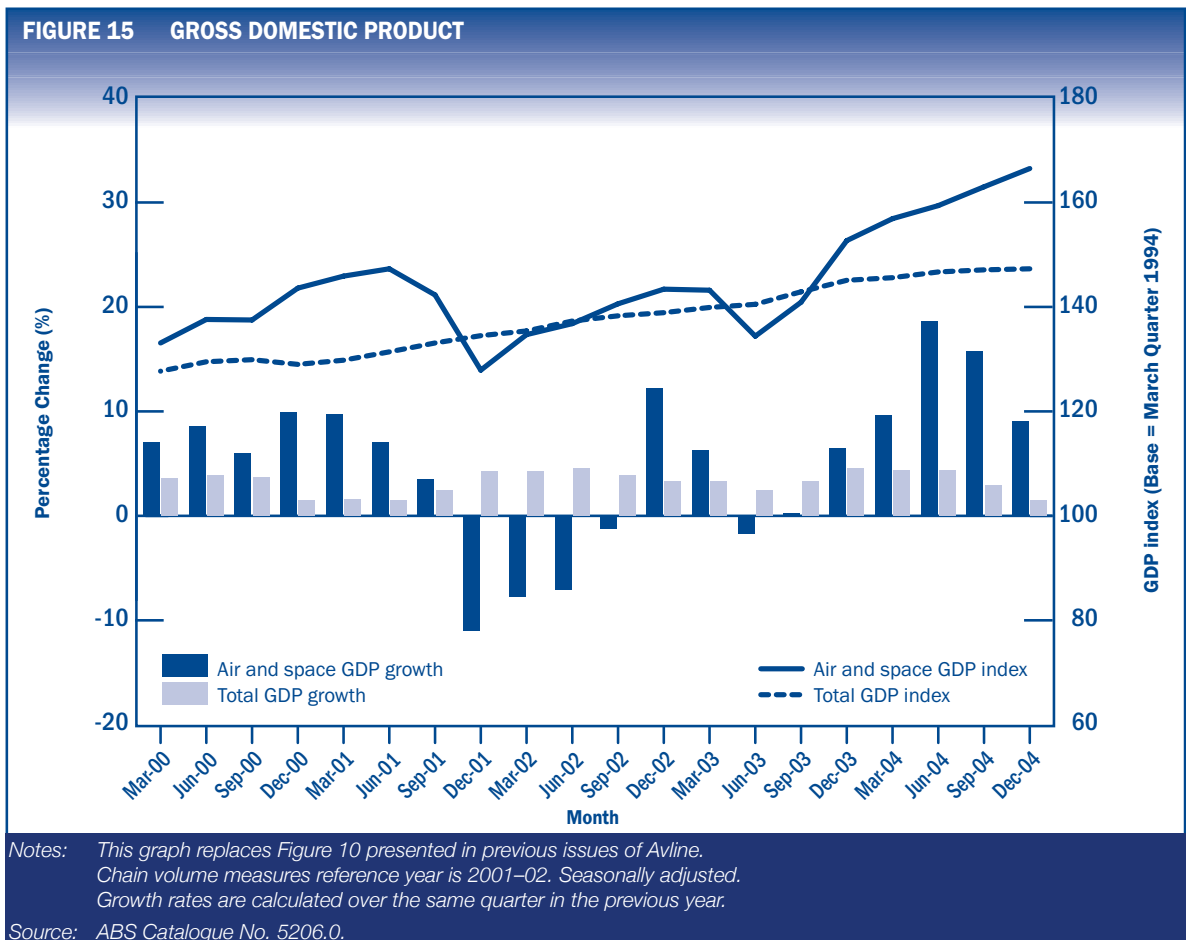


### Gross Domestic Product

Figure 15 shows indexes based on Australia's Gross Domestic Product (GDP), comparing all industries with the air and space industry component.

Air and space industries showed strong growth over the year, with the Air and Space Index peaking at 166.5 in the quarter ending December 2004. This was up 9.0 per cent over the previous December quarter.

The Total GDP Index showed steady growth. The Index reached 147.3 for the December quarter 2004, up 1.5 per cent on the corresponding quarter in 2003.



## Airport charges

Table 4 shows the real charges incurred by aircraft operators per return passenger at Australia's major capital city airports as at January 2004, July 2004 and January 2005. This is presented by category of aircraft type and shows airport, air services and security components.

**TABLE 4 REAL AIRPORT CHARGES (PER PASSENGER) BY AIRCRAFT TYPE**

Aircraft	Sydney			Melbourne			Brisbane			Perth			Adelaide		
	Jan -04	Jul -04	Jan -05	Jan -04	Jul -04	Jan -05	Jan -04	Jul -04	Jan -05	Jan -04	Jul -04	Jan -05	Jan -04	Jul -04	Jan -05
<b>747-438</b>															
Airport	30.89	30.46	30.40	22.41	22.49	22.22	18.11	18.62	18.41	19.30	19.34	19.11	22.66	22.81	22.55
Airservices	7.49	7.38	6.78	6.17	6.08	5.92	8.72	8.60	8.27	13.44	13.25	11.93	16.89	16.66	15.14
Security	6.86	6.76	4.65	3.63	3.56	2.69	5.85	8.33	8.24	3.07	3.03	5.13	6.03	10.60	10.47
<b>Total</b>	<b>45.23</b>	<b>44.61</b>	<b>41.83</b>	<b>32.21</b>	<b>32.13</b>	<b>30.84</b>	<b>32.68</b>	<b>35.56</b>	<b>34.91</b>	<b>35.81</b>	<b>35.62</b>	<b>36.18</b>	<b>45.58</b>	<b>50.07</b>	<b>48.16</b>
<b>737-800</b>															
Airport	6.19	6.11	6.04	6.82	6.84	6.76	5.90	6.11	6.04	7.95	7.97	7.88	7.95	8.01	7.91
Airservices	3.52	3.47	3.19	2.90	2.86	2.78	4.10	4.04	3.88	6.32	6.23	5.61	7.94	7.83	7.12
Security	2.71	2.67	1.41	0.39	0.39	0.31	0.49	0.62	0.61	3.03	2.99	3.59	0.77	0.76	0.75
<b>Total</b>	<b>12.42</b>	<b>12.25</b>	<b>10.63</b>	<b>10.11</b>	<b>10.08</b>	<b>9.86</b>	<b>10.49</b>	<b>10.77</b>	<b>10.53</b>	<b>17.30</b>	<b>17.19</b>	<b>17.07</b>	<b>16.66</b>	<b>16.59</b>	<b>15.77</b>
<b>Dash 8-300</b>															
Airport	6.19	6.11	6.04	6.82	6.84	6.76	5.60	5.79	5.73	7.95	7.97	7.88	3.40	3.42	3.38
Airservices	3.34	3.29	3.02	2.75	2.71	2.64	3.89	3.83	3.68	5.99	5.91	5.32	7.53	7.42	6.75
Security	2.71	2.67	1.41	0.39	0.39	0.31	0.47	0.59	0.58	3.03	2.99	3.59	0.00	0.00	0.00
<b>Total</b>	<b>12.24</b>	<b>12.07</b>	<b>10.47</b>	<b>9.96</b>	<b>9.94</b>	<b>9.71</b>	<b>9.95</b>	<b>10.21</b>	<b>9.99</b>	<b>16.98</b>	<b>16.87</b>	<b>16.78</b>	<b>10.93</b>	<b>10.84</b>	<b>10.13</b>
<b>SAAB340B</b>															
Airport	6.19	6.11	6.04	6.82	6.84	6.76	5.82	6.03	5.96	7.95	7.97	7.88	3.53	3.55	3.51
Airservices	3.47	3.42	3.14	2.86	2.82	2.74	4.04	3.99	3.83	6.23	6.14	5.53	7.83	7.72	7.02
Security	2.71	2.67	1.41	0.39	0.39	0.31	0.49	0.61	0.60	3.03	2.99	3.59	0.00	0.00	0.00
<b>Total</b>	<b>12.37</b>	<b>12.20</b>	<b>10.59</b>	<b>10.07</b>	<b>10.05</b>	<b>9.82</b>	<b>10.35</b>	<b>10.62</b>	<b>10.39</b>	<b>17.22</b>	<b>17.10</b>	<b>17.00</b>	<b>11.36</b>	<b>11.28</b>	<b>10.53</b>
<b>Metro 23</b>															
Airport	7.78	7.67	7.58	6.82	6.84	6.76	5.94	6.15	6.08	7.95	7.97	7.88	3.72	3.79	3.79
Airservices	3.54	3.49	3.21	2.92	2.88	2.80	4.13	4.07	3.91	6.36	6.27	5.64	8.24	8.24	7.57
Security	1.92	1.90	1.16	0.39	0.39	0.31	0.49	0.62	0.61	3.03	2.99	3.59	0.00	0.00	0.00
<b>Total</b>	<b>13.24</b>	<b>13.06</b>	<b>11.95</b>	<b>10.13</b>	<b>10.10</b>	<b>9.88</b>	<b>10.56</b>	<b>10.84</b>	<b>10.60</b>	<b>17.34</b>	<b>17.23</b>	<b>17.11</b>	<b>11.95</b>	<b>12.03</b>	<b>11.36</b>

Notes: This table now shows real charges rather than the nominal charges presented in previous issues of Avline.

Calculated on a return passenger basis, that is, assuming one arrival and one departure, for price schedules as at 31 January and 31 July each year.

Sources: BTRE estimates based on airport public price schedules supplied by airport operators; Airservices Australia published price schedule.



Airport charges data estimates what an airline may expect to pay – based on publicly available information published by airport authorities and Airservices Australia – that:

- includes GST
- excludes confidential agreements between airports and airlines
- excludes terminal charges for domestic and regional services, which are often confidential and may differ by terminal and airline.

The data should be interpreted with caution as actual rates may vary for individual aircraft operators based on negotiated contracts.

International transit and transfer passengers at Sydney and Brisbane airports do not incur the international terminal charge. In order to exclude these passengers from the international terminal charge calculation at these airports, the BTRE has assumed that transit and transfer passengers comprise 10 per cent of international passengers.

All five airports set security charges on a cost-recovery basis. If significant over (under) recovery occurs in a period, security charges are reduced (increased) in the subsequent period, which may result in period to period variations in total charges.

Over the six months between July 2004 and January 2005, total airport charges decreased for all categories of aircraft at each of the main airports, except for a minimal increase on international flights at Perth Airport due to an increase in the security component of the total charge. Airservices charges decreased at all airports. The airport component of the total also either decreased minimally or showed no change at all ports.

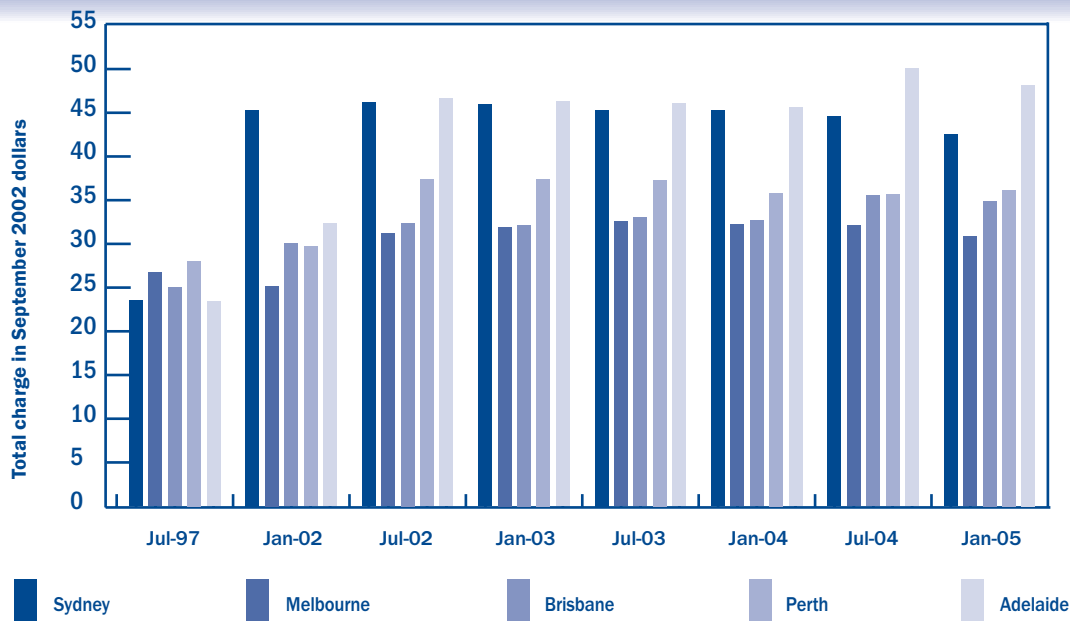
Over the twelve month period between January 2004 and January 2005, total charges decreased for all categories of aircraft at Sydney and Melbourne airports and for domestic and regional services at Perth and Adelaide. There were slight increases for domestic and regional flights at Brisbane Airport, while more significant increases occurred in relation to international flights at Brisbane, Perth and Adelaide airports. Again, these were mostly related to the security component. Across all five airports, security charges on international flights increased by an average of 25.7 per cent over the twelve months, while total airport charges for international flights increased by an average of 2.8 per cent.

Real airport charges for the international, domestic and regional sectors are also shown in Figures 16, 17 and 18 respectively. These are based on aircraft considered representative of each sector and show data by airport from January 2002 to January 2005. January 1997 is included as the base year for comparison.





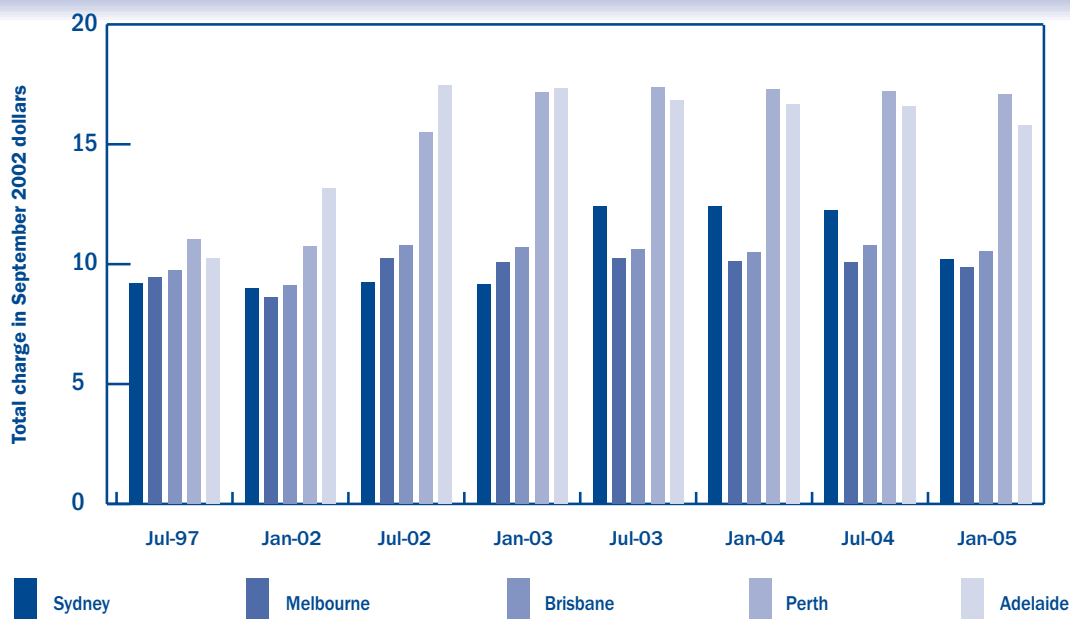
**FIGURE 16 REAL INTERNATIONAL AIRPORT CHARGES (PER RETURN PASSENGER)**



Notes: This graph shows charges for a 747-438 as representative of international flights. It replaces Figure 13 in previous issues of Avline and now shows total charges rather than only the airport component. Charge calculations are based on BTRE assumptions and may differ from actual charges incurred by specific operators. International charge estimates include terminal charges. Data for periods from July 2000 are GST inclusive. Sydney charges exclude the noise charge. An indicative international load factor of 72.0 per cent is assumed.

Sources: Published airport charge data; ABS 8 capital city CPI (6401.0); BTRE assumptions..

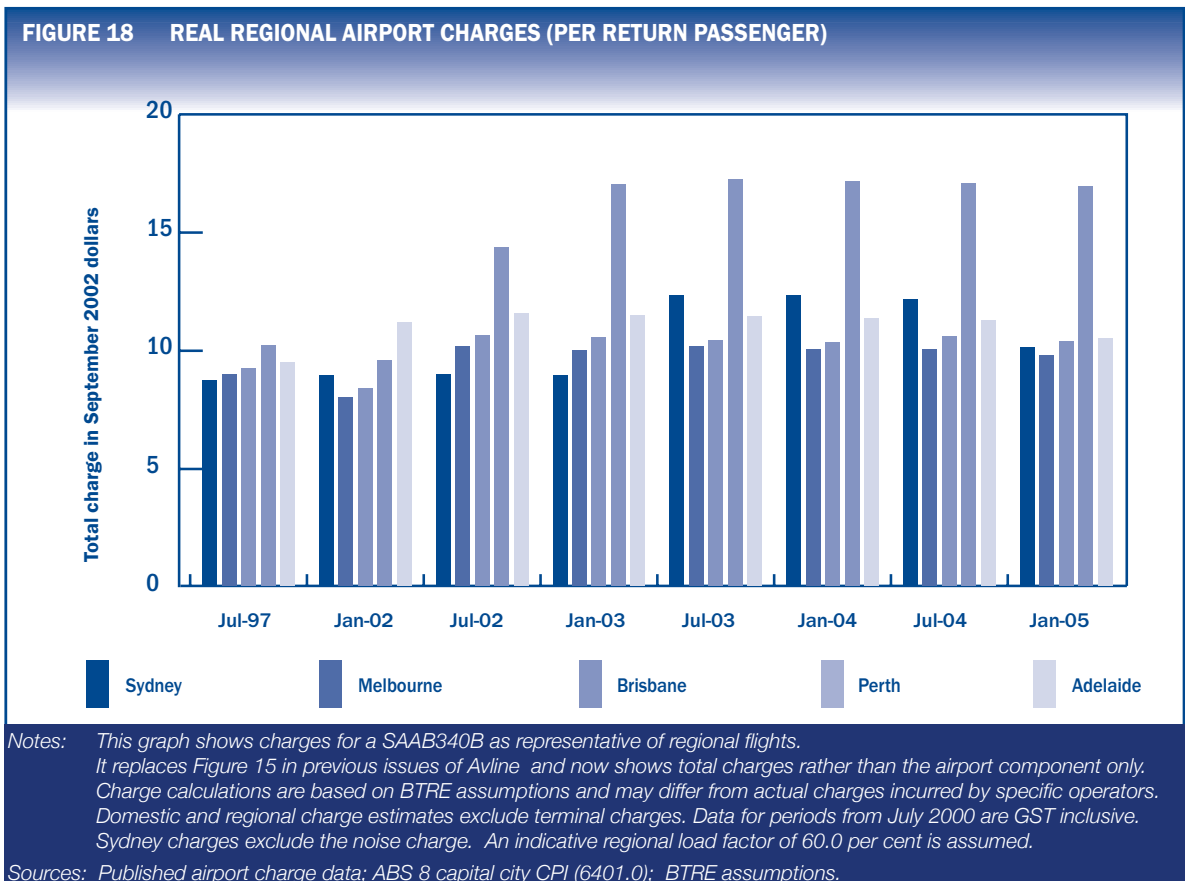
**FIGURE 17 REAL DOMESTIC AIRPORT CHARGES (PER RETURN PASSENGER)**



Notes: This graph shows charges for a 737-800 as representative of domestic flights. It replaces Figure 14 in previous issues of Avline and now shows total charges rather than the airport component only. Charge calculations are based on BTRE assumptions and may differ from actual charges incurred by specific operators. Domestic and regional charge estimates exclude terminal charges. Data for periods from July 2000 are GST inclusive. Sydney charges exclude the noise charge. An indicative domestic load factor of 76.5 per cent is assumed.

Sources: Published airport charge data; ABS 8 capital city CPI (6401.0); BTRE assumptions.





The parameters used by the BTRE in its airport charges calculations are summarised in Table 5. The aircraft types shown are representative of international, trunk route domestic, and large, medium and smaller regional routes.

**TABLE 5 PARAMETERS USED IN AIRPORT CHARGE CALCULATIONS**

Aircraft type	Operational sector (typical)	Aircraft maximum take-off weight (tonnes)	Number of aircraft seats (nominal)	Average passenger load factor (%)
747-438	International	394.6	394	72.0
737-800	Domestic	79.0	158	76.5
Dash 8-300	Regional	18.6	50	60.0
SAAB 340B	Regional	13.2	34	60.0
Metro 23	Regional	7.5	19	60.0

**Notes:** The load factor is the proportion of total aircraft seats that are filled by paying customers. Aircraft load factors are derived from BTRE Statistics Section data collections for the relevant operational sector and may not reflect actual load factors at specific airports.

**Sources:** Airline websites; CASA aircraft register; BTRE aviation databases and assumptions.



## Definitions

Available seats	The number of aircraft seats available for passenger use.
Available Seat Kilometres (ASKs)	Calculated by multiplying the number of seats available on each flight stage, by the distance in kilometres between the ports. The distances used are Great Circle Distances.
Cancellation	A flight that is cancelled or rescheduled within seven days of its scheduled departure time.
City pair	The ports shown make up the city pair route. Passenger movements shown for a city pair reflect total traffic in both directions.
Domestic airline	An airline performing regular public transport services between capital cities and major tourist centres.
Flight stage	The operation of an aircraft from take-off to landing.
Great Circle Distance	The shortest distance between any two points on the globe as measured over the earth's surface.
Load factor	The proportion of total aircraft seats that are filled by paying passengers.
On time arrival	A flight arrival that arrives at the gate within 15 minutes of the scheduled arrival time shown in the carrier's schedule.
On time departure	A flight departure that departs the gate within 15 minutes of the scheduled departure time shown in the carrier's schedule.
On time performance	Measured as number of flights operating on time as a percentage of the number of flights operated on any particular sector.
Passenger movements	Revenue passengers carried.
Regional airline	An airline performing regular public transport services and primarily servicing regional centres.
Revenue Passengers	All passengers paying any fare. Frequent flyer redemption travellers are regarded as revenue passengers.
Revenue Passenger Kilometres (RPKs)	Calculated by multiplying the number of revenue passengers travelling on each flight stage, by the distance in kilometres between the ports. The distances used are Great Circle Distances.
Regular Public Transport (RPT)	Aircraft transport available to the public and operated to fixed schedules and between specified fixed terminals.





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