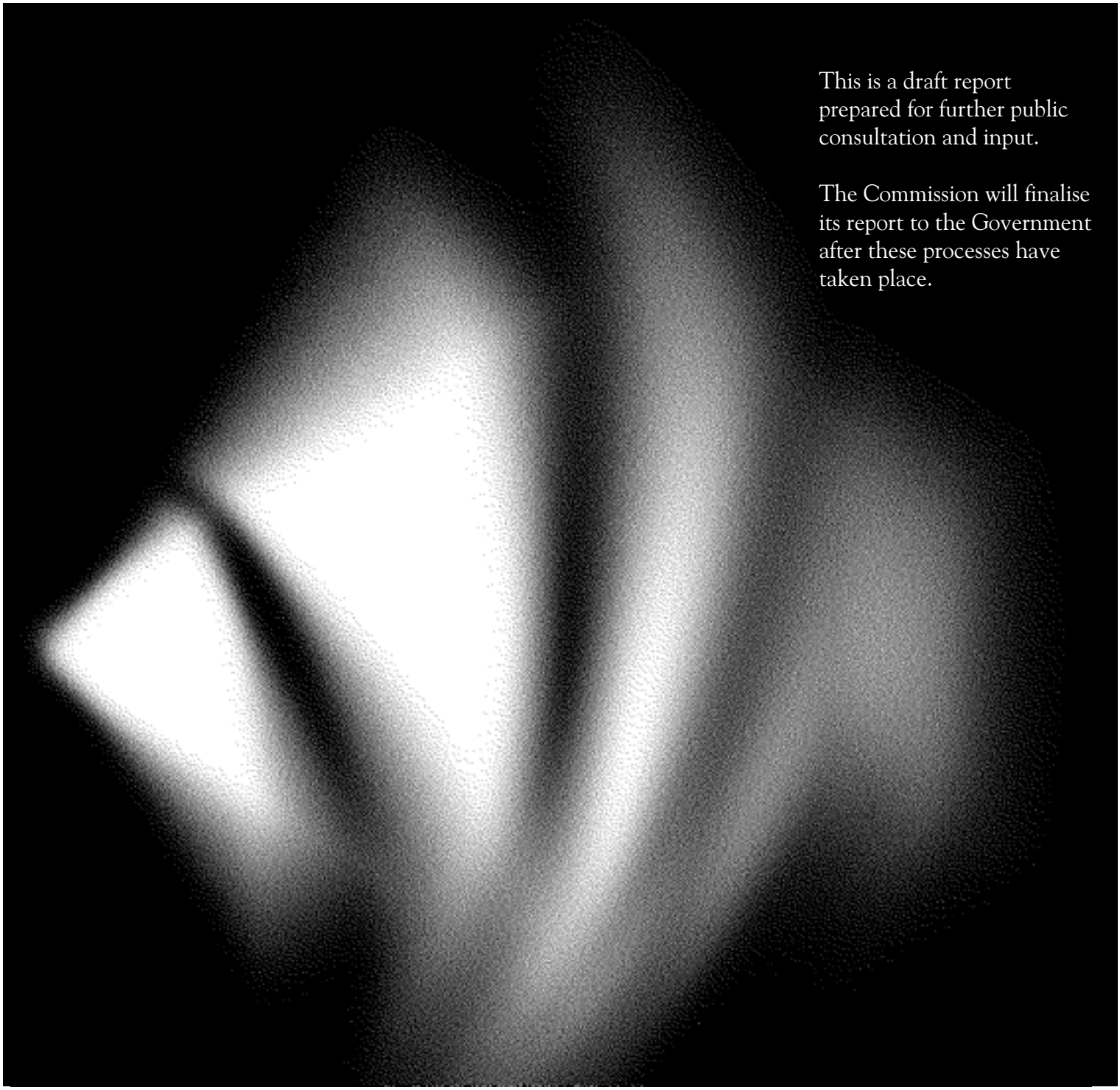
PRODUCTIVITY COMMISSION

Price Regulation of Airport Services

Draft Report



This is a draft report prepared for further public consultation and input.

The Commission will finalise its report to the Government after these processes have taken place.

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The Productivity Commission

The Productivity Commission, an independent Commonwealth agency, is the Government's principal review and advisory body on microeconomic policy and regulation. It conducts public inquiries and research into a broad range of economic and social issues affecting the welfare of Australians.

The Commission's independence is underpinned by an Act of Parliament. Its processes and outputs are open to public scrutiny and are driven by concern for the wellbeing of the community as a whole.

Information on the Productivity Commission, its publications and its current work program can be found on the World Wide Web at www.pc.gov.au or by contacting Media and Publications on (03) 9653 2244.

Opportunity for further comment

You are invited to examine this draft report and provide comment on it within the Commission's public inquiry process.

Written responses should be received by the Commission on or before Friday, 19 October 2001. The Commission would appreciate receiving submissions to be presented at the public hearings at least a week prior to the particular hearings. After submissions have been received the final report will be prepared. Public hearings commence at 9.00am and have been arranged as follows:

Public hearing dates and venues*

Location	Date	Venue
Sydney	Monday, 15 October 2001	Australian Business Centre 140 Arthur Street North Sydney
Melbourne	Tuesday, 16 October 2001 Wednesday, 17 October 2001 Thursday, 18 October 2001	Productivity Commission Level 28, 35 Collins Street Melbourne

* Subject to change – see accompanying circular.

Commissioners

For the purposes of this inquiry and draft report, in accordance with section 40 of the *Productivity Commission Act 1998* the powers of the Productivity Commission have been exercised by:

Professor Richard Snape	Presiding Commissioner
Dr Neil Byron	Commissioner

Terms of reference

I, ROD KEMP, Assistant Treasurer, pursuant to Parts 2 and 3 of the *Productivity Commission Act 1998*, hereby refer Prices Regulation of Airports to the Commission for inquiry and report within 12 months of receipt of this reference. The Commission is to hold hearings for the purpose of the inquiry.

Background

2. During 1997 and 1998, long-term leases (50 years with an option to renew for a further 49 years) were sold over seventeen airports previously operated by the Federal Airports Corporation, to private sector operators. In July 1998 two wholly Australian Government-owned companies were formed to acquire leases over the four Sydney basin airports (Sydney, Bankstown, Camden, Hoxton Park) and Essendon airport.

3. All 22 of the leased airports are regulated under the *Airports Act 1996* and twelve of the airports (Adelaide, Alice Springs, Brisbane, Canberra, Coolangatta, Darwin, Hobart, Launceston, Melbourne, Perth, Sydney and Townsville) are currently subject to prices regulation under the *Prices Surveillance Act 1983*.

4. Except for Sydney Airport, the prices regulation of the airports comprises a CPI-X price cap on declared aeronautical services, prices monitoring of aeronautical related services, and special provisions for necessary new investment at airports. At Sydney Airport aeronautical services are subject to prices surveillance and aeronautical related services are subject to price monitoring. The arrangements are administered by the Australian Competition and Consumer Commission.

5. In establishing the current prices regulations in 1997, the Government announced that the arrangements would only apply for the first five years of operation of the lease. Subsequent regulation would be determined after a review of the arrangements before the end of the first five year period, with the review to be based on the premise that the price caps applied to aeronautical services will no longer operate.

6. The purpose of this inquiry is to examine whether new regulatory arrangements, targeted at those charges for airport services or products where the airport operator has been identified as having most potential to abuse market power, are needed to ensure that the exercise of any such power may be appropriately counteracted.

Scope of Inquiry

7. The Commission is to report on whether there is a need for prices regulation of airports, and the appropriate form of any prices regulation, taking into account the following principles:

(a) the CPI-X price cap applied to aeronautical charges during the first five year period of private ownership will no longer operate;

(b) future prices regulation should be applied to those aeronautical services and those airports where airport operators have most potential to abuse market power;

(c) airport operators may propose to the inquiry alternative approaches to prices regulation which would provide equal or better protection to users;

(d) prices regulation should minimise compliance costs on airport operators and the Government;

(e) prices regulation should promote the efficient operation of airports;

(f) prices regulation should facilitate benchmarking comparisons between airports, competition in the provision of services within airports (especially protecting against discrimination in relation to small users and new entrants), and commercially negotiated outcomes in airport operations; and

(g) the Commission may recommend more effective forms of prices regulation than are currently in place, where this may be necessary.

8. In making its recommendations, the Commission is to:

(a) review the operation of the existing prices regulation of airports;

(b) identify the rationale for any future prices regulation at airports;

(c) identify relevant alternatives to the current arrangements, including the prices oversight arrangements at relevant airports in other countries, and the extent to which these alternatives would achieve the rationale in (b);

(d) analyse and, as far as practical, quantify the benefits, costs and economic and distributional impacts of the current arrangements and the alternatives identified in (c);

(e) identify the different groups, including the travelling public, likely to be affected by the current prices oversight arrangements and the alternatives identified in (c); and

(f) list the individuals and groups consulted during the review and outline their views.

9. In undertaking the review, the Commission is to advertise nationally, consult with key interest groups and affected parties, and produce a report.

10. The Government will consider the Commission's recommendations, and the Government's response will be announced as soon as possible after the receipt of the Commission's report.

ROD KEMP
21 December 2000

Contents

Abbreviations and explanations

Abbreviations

AAA	Australian Airports Association
AAL	Adelaide Airport Limited
ACA	Airport Coordination Australia
ACCC	Australian Competition and Consumer Commission
ACTO	Australian Cargo Terminal Operators
Airports Act	*Airports Act 1996*
APAC	Australia Pacific Airports Corporation
APAM	Australia Pacific Airports (Melbourne)
APS	Australian Protective Services
ASA	Airservices Australia
BAA	British Airports Authority
BAA plc	British Airports Authority publicly listed company
BAC	Brisbane Airport Corporation
BARA	Board of Airline Representatives of Australia
BTE	Bureau of Transport Economics
BTR	Bureau of Tourism Research
CAA	Civil Aviation Authority (UK)
CASA	Civil Aviation Safety Authority
CC	Commerce Commission (NZ)
CPA	Competition Principles Agreement
CPI	Consumer Price Index
DoTRD	Department of Transport and Regional Development
DoTRS	Department of Transport and Regional Services

FAC	Federal Airports Corporation
GAA	General aviation aircraft
GATS	General Agreement on Trade in Services
GCAL	Gold Coast Airport Limited
IATA	International Air Transport Association
IC	Industry Commission
ICAO	International Civil Aviation Organization
JUHI	Joint User Hydrant Installation
MTAA Super Fund	Motor Trades Association of Australia Superannuation Fund
MTOW	Maximum take-off weight
NCC	National Competition Council
NEC	National Electricity Code
NECG	Network Economics Consulting Group
NNI	Necessary new investment
NTTC	Northern Territory Tourist Commission
OECD	Organisation for Economic Co-operation and Development
PC	Productivity Commission
Pers. comm.	Personal communication
PS Act	*Prices Surveillance Act 1983*
PSA	Prices Surveillance Authority
RPT	Regular public transport
SACL	Sydney Airports Corporation Limited
Sub.	Submission
Sydney Airport	Sydney Kingsford Smith Airport
TP Act	*Trade Practices Act 1974*
Trans.	Transcripts
TRL	Transport Research Laboratory
VFR	Visiting friends and relatives

WAC	Westralia Airports Corporation
WACC	Weighted average cost of capital
WIAL	Wellington International Airport Limited

Explanations

Draft recommendations

DRAFT RECOMMENDATION

Recommendations in the body of the report are highlighted using bold italics with a heading, as this is.

Draft findings

DRAFT FINDING

Findings in the body of the report are paragraphs highlighted using italics with a heading, as this is.

Requests for further information

Information requests are paragraphs highlighted using italics, as this is.

Key messages

- Australia's major airports are in transition from government ownership to privatised commercial enterprises. The prices they can charge for some airport services are subject to regulation. The Commission is required to examine whether new regulatory arrangements are needed for airport services where airport operators have most potential to abuse market power.
- The Commission judges that Sydney, Melbourne, Brisbane and Perth airports have most market power. Their market power extends to the main aeronautical services (including refuelling) and, probably, front door access. Adelaide, Canberra, and to a lesser extent, Darwin, also have a degree of market power. Any market power of other airports is judged not to warrant special regulatory action.
- Commercial opportunities, particularly relating to non-aeronautical activities such as retailing and car parking, can be expected to constrain the exercise of market power in aeronautical services at major airports.
- The Commission recommends that continued regulatory oversight is warranted for the seven major airports. Two sets of options are identified.
- The Commission's less preferred option is for Melbourne, Brisbane and Perth airports to continue to have CPI-X price regulation (dual till) but with much clearer provisions for investment. For Sydney Airport (which is capacity constrained) there should be at most notification of aeronautical price increases above the CPI, with price increases allowed for peak periods and to cover investment. Adelaide, Canberra and Darwin airports would have price and conduct monitoring.
- The second option, which the Commission considers to be clearly superior, is for a five-year (probationary) period of price and conduct monitoring for all seven airports, with no direct price control over that period. These new monitoring arrangements would be specific to airports. Towards the end of the period, conduct of all parties would be reviewed independently to see whether further regulation is necessary. Consistent with the terms of reference, the Commission's aim is to promote commercial relationships. The monitoring regime and the possibility of price regulation after the probationary period are designed to deter the abuse of any market power.
- Under both options, Parts IIIA and IV of the Trade Practices Act would continue to apply. Any industry-specific access provisions should mirror the access declaration criteria in Part IIIA.
- Whatever the regulatory framework decided for Sydney Airport, that policy, in particular the pricing and investment provisions, should be clearly and publicly articulated to bidders so that bid prices can reflect the policy.

Overview

Is price regulation of airport services required at privatised airports? If so, in what form? The main purpose of this inquiry is to address these questions, including for the soon-to-be-privatised Sydney Airport.

Though the terms of reference encompass all Australian airports, the Commission has focussed most of its attention on the 12 'core-regulated' airports — that is, the 11 price-capped privatised airports and Sydney Airport. These 12 airports account for 96 per cent of all international, 91 per cent of domestic and 52 per cent of regional passenger movements.

In making its recommendations, the Commission is required to take into account a number of principles. Most of these were presaged when the airport leases were sold in 1997 and 1998. The thrust of these principles is that any future price regulation should be targeted at aeronautical services and airports where airport operators have most potential to abuse market power. Other objectives include fostering efficient operation of airports and commercially-negotiated outcomes, minimising compliance costs on all parties, and promoting transparency and competition.

Background

Prior to 1997, most major airports were operated by the Federal Airports Corporation (FAC). The FAC set its landing and terminal charges on a network-wide basis. More profitable airports subsidised unprofitable or less profitable ones and revenues from complementary (non-aeronautical) activities, such as car parking and retailing, subsidised aeronautical services.

In 1997 (Phase 1 airports) and 1998 (Phase 2 airports), 50-year leases for 17 major Australian airports (except Sydney Airport) were sold to private operators. The stated rationale was to 'improve the efficiency of airport investment and operations in the interests of users and the general community, and to facilitate innovative management'. For the main part, leases were sold for individual airports. Competition was to be encouraged by restricting cross-ownership of certain airport pairs and limiting airline ownership of airports. In addition, the pricing approach followed by the FAC (otherwise known as a 'single till') was not mandated.

Individual airport operators could retain profits from their non-aeronautical activities.

At the same time, however, there was a concern that privatised airports might abuse their market power with respect to aeronautical services. Thus, privatisation was accompanied by what were described at the time as *transitional* price-regulation measures, designed to allow all parties to adjust to the new operating environment for airports. Essentially, these arrangements largely continued for the first five years the FAC aeronautical prices that were in place prior to privatisation.

Price regulation comprised a five-year, CPI-X annual cap on prices for aeronautical services at 11 of the largest airports — Melbourne, Brisbane, Perth, Adelaide, Canberra, Darwin, Hobart, Launceston, Coolangatta, Townsville, and Alice Springs. The cap was complemented by cost pass-through provisions for necessary new investment, by quality monitoring, and by special access arrangements designed to facilitate new airline entry. Though Sydney Airport was not privatised, its lease was transferred to the government-owned Sydney Airports Corporation Limited (SACL). It has been subject to prices notification under the *Prices Surveillance Act 1983* (where any price increases have to be vetted by the ACCC) rather than a price cap.

About Australian airports

Airports primarily provide facilities that give intermediate services to airlines: aircraft movement facilities including runways, taxiways and aprons; and passenger processing facilities including aerobridges, baggage systems, check-in counters, public areas in terminals, flight information displays, and landside roads. (Australian airports do not provide air traffic control services — this is the responsibility of Airservices Australia.)

Most domestic terminals at the main Australian airports are operated by the two major domestic airlines under long-term lease arrangements negotiated many years prior to airport privatisation. New common-user domestic terminals constructed for new entrants in Australia are operated by the airports, as are international terminals.

Airports also provide or facilitate a range of other services — such as restaurants, shopping and car parking — to passengers and others. Since privatisation, the proportion of airport revenue earned from these non-aeronautical activities has increased from about 62 per cent to around 69 per cent of total revenue of the 11 core-regulated, privatised airports. Sydney Airport earned about 62 per cent of its revenue from non-aeronautical activities prior to aeronautical price increases in 2001.

Aeronautical charges

Airports typically levy a landing charge that covers use of runways, taxiways and aprons (currently averaging around $5.40 per aircraft tonne at privatised core-regulated airports, or about $3.60 per 'average' passenger on a typical B737 flight). Where airports operate the terminal, a terminal charge is applied (averaging about $3 per international passenger at the larger international privatised airports). Additional charges sometimes are levied for aircraft parking (at Melbourne Airport, $50 per day but $10 per day is more common).

Aeronautical charges at Australia's core-regulated airports appear low by international standards. The ACCC-vetted recent price increases for Sydney Airport (of around 100 per cent) will still leave that airport's average landing and terminal charges for international flights below the average for major world airports, and Sydney's new charges are now the highest of the 12 core-regulated airports.

Charges for regular public transport (RPT) flights at other Australian airports often are not publicly available because rates are negotiated with airlines. Moreover, for those that are available, comparisons are very difficult because these airports usually supply terminal and other services not supplied by core-regulated airports, and their traffic volumes typically are much lower. Generally they are owned by local councils.

What is the rationale for price regulation of airports?

The *prima facie* rationale for price regulation of airports is their perceived market power and incentive to exercise it by raising prices above the efficient costs of supplying those services. Such pricing could increase airfares and reduce the consumption of air travel below efficient levels. Airports with market power thus could earn excessive profits or operate inefficiently; they might also allow quality to deteriorate and not invest appropriately. It is possible that market power could be used to deny access to the airport, either by way of higher prices or by imposing other unacceptable conditions of access.

Abuse of market power (and, indeed, any regulation designed to constrain it) will have both efficiency effects and distributional effects. The latter involve transfers between airports, airlines and consumers. However, while distributional effects are important, the Commission does not consider that it is in a position to make a judgement about preferred income distributions. Hence, in assessing the need for appropriate regulation, possible efficiency outcomes, rather than distributional outcomes, have guided the Commission's assessment.

Market power, of itself, is not sufficient justification for price regulation of airports. Price regulation should promote more efficient outcomes than those otherwise likely to be achieved by the market. Hence, the case for price regulation rests on a comparison of the likely efficiency costs of unregulated airport pricing and the likely outcomes under price regulation.

Airports and barriers to entry

In most cities there tends to be only one airport catering for regular public transport (RPT). This is because:

- basic airport infrastructure, such as runways and taxiways, must be consumed as a package and thus requires a single provider of a large, lumpy investment;
- there is some evidence of economies of scale at least in relation to runways and taxiways;
- most major aeronautical assets, other than land, typically cannot be used for other purposes and thus are sunk; and
- airports require very large land allocations and buffer zones for environmental and safety reasons and this may make duplication prohibitively costly (or, for planning and regulatory reasons, impossible) in convenient locations.

Network or coordination benefits also accrue to airlines and their passengers from using one airport. Airlines can coordinate aircraft and passenger transfers at lower cost and passengers do not have the inconvenience of transferring between airports. Even if given the choice of two similar (uncongested) airports serving the same destination, airlines are unlikely to spread similar services across both.

Though these natural monopoly characteristics of airports arise from efficiency benefits (one airport in a particular city can provide services more efficiently than two), inevitably, they also reduce scope for direct competition in the provision of airport services for that city.

Which major airports have market power?

Lack of effective competition between airports in a particular region is a necessary but not sufficient condition for market power. The degree of market power also will depend on the sensitivity of users to an increase in airport charges. This, in turn, depends on the sensitivity of passengers to changes in airfares to a particular destination (which depends on their willingness to substitute other destinations or alternative transport and communication modes), the scope for using another airport

in the region, the share of airport charges in the airfare, and the supply responses of other input providers.

On average, airport services account for a small share of airfares which, of itself, suggests low price sensitivity. But airport charges may comprise a far more substantial share of average fares of budget airlines. In addition, the sensitivity of some travellers to price changes at *particular* airports may be quite high.

For example, tourists are more likely to compare package prices to different destinations and to substitute different travel modes to a destination (self-drive versus flying, for example). International tourists may be flexible as to their entry/exit point. On the other hand, destination-specific, time-sensitive business travellers are likely to be much less responsive to price changes, though their frequency of travel may be price sensitive.

Table 1 summarises the Commission's assessment of substitution possibilities for domestic passengers at the 12 core-regulated airports. This analysis is based on an assessment of the types of traveller served by particular airports. The potential for airport and modal substitution is likely to be greater for airports that are more reliant on holiday travellers, as holiday travellers in general appear to be more price sensitive than business travellers.

Table 1 **Summary of demand and competition characteristics of core-regulated airports for domestic passenger traffic**

Airport	*Main market segment to destination for interstate travel*	*Potential for destination substitution*	*Potential for modal substitution*	*Potential for airport substitution*
Adelaide	Business/VFR[a]	Low	Moderate	Low
Alice Springs	Holiday	High	Moderate	High
Brisbane	Business/VFR	Low	Moderate	Low
Canberra	Business/VFR	Low	High	Low
Coolangatta	Holiday	High	Moderate/High	High
Darwin	Holiday	High	Moderate	Low
Hobart	Holiday	High	Moderate	High
Launceston	Holiday	High	Moderate	High
Melbourne	Business/VFR	Low	Moderate	Low
Perth	Business/VFR	Low	Low	Low
Sydney	Business/VFR	Low	Moderate	Low
Townsville	Holiday	High	Moderate	Low

[a] Visiting Friends and Relatives.

The Commission agrees with the ACCC that the two Tasmanian core-regulated airports, Hobart and Launceston, as well as Coolangatta and Alice Springs airports appear to have little scope to exercise market power because of their reliance on the

tourism market and, particularly for this market segment, scope for competition from 'nearby' airports.

The Commission also is of the view that, because of its reliance on the holiday market (and scope for competition between holiday destinations and from other transport modes), Townsville Airport has limited market power.

On the other hand, it appears that Brisbane, Melbourne, Perth and Sydney airports possess significant market power. Most participants, including these airport operators, agreed.

- They have high proportions of business and VFR travellers. (Even so, except for Perth Airport, a fairly high proportion of visitors to these States travels by modes other than air.)
- They do not appear to face significant competition for domestic passenger traffic from other airports.
- Their status as the main international ports of arrival and departure in the country may add to their potential market power (and leverage) in the domestic market. Competition among these airports for international traffic may moderate, though not eliminate, this effect.

The degree of market power held by Adelaide, Canberra and Darwin airports is less clear. Darwin is the main air entry point for the Northern Territory, and the only direct port of arrival to the Territory for international travellers. Like Perth, it is remote, yet its main market segment is holiday travel. On balance, the Commission's assessment is that Darwin Airport has more market power than Alice Springs but less than the larger capital city airports.

Both Adelaide and Canberra have significant proportions of business and VFR passengers and airport substitution for these segments is not feasible. Yet a very large proportion of visitors to Canberra arrives in private vehicles. This may reflect the high proportion of Sydney–Canberra traffic in total Canberra visitor arrivals — indeed, driving on this route to or from some Sydney suburbs may be less time-consuming than flying.

Although the market power of Adelaide and Canberra airports does not appear to be as great as Brisbane, Melbourne, Perth or Sydney, in the Commission's view, both airports appear to have at least a moderate degree of market power.

Market power of other airports?

More than 200 non-core-regulated airports cater for some RPT (rather than just general aviation). While the Commission has not been able to assess likely market power of individual non-core-regulated airports, charges for RPT at these airports vary significantly. No charges are imposed at some regional airports, while at others charges can be very high.

The Commission received a few complaints about high charges at certain non-core-regulated airports. Of themselves, high charges do not necessarily indicate an abuse of market power. The small traffic volumes of most regional airports suggest that efficient unit costs may be high.

Some participants also raised concerns about local councils (which dominate ownership of regional airports) using airport charges to fund general community projects rather than aeronautical facilities. Whether or not this is the case, if the airport policy of councils does not reflect community wishes, then this arguably is more properly a local governance issue, not a market power issue to be addressed by national economic regulation of regional airports. This conclusion is reinforced by the high compliance costs of economic regulation, which would swamp any possible efficiency benefits at smaller airports.

Objectives other than the exploitation of market power also may explain the seemingly high charges at airports located at some holiday resorts. If landing charges reflect the high costs of the airstrip, an objective to keep visitor numbers low so as to cater for a segment of the market, or environmental objectives, then it may reflect an attempt to differentiate a 'product' in a very competitive tourist market, rather than abuse of market power.

In which services do airports with market power have market power?

For those airports assessed to have moderate to significant market power, their power will extend to the bundle of services for which there are few alternative suppliers and which an airline and passengers must consume. The Commission's assessment of the degree of airport market power across the range of services provided by airports is summarised in table 2.

Market power appears to be strongest for:

- facilities for aircraft movements including access to runway, taxiway and aprons; and

- vehicle access, including front-door access to the airport for passengers, transport providers, and off-airport car-parking providers.

Table 2 **Market power of airports in particular services**

Service	*Degree of market power*
Aircraft movement facilities	High
Passenger movement facilities	Moderate/High
Lounge space	Low
Vehicle access facilities	High
Car parking	Low/Moderate
Taxi facilities	Low/Moderate
Aircraft refuelling	Moderate/High (case-by-case)
Aircraft light and emergency maintenance sites	Moderate
Aircraft heavy maintenance facilities	Low
Flight catering facilities	Low
Freight and ground equipment storage sites	Low
Freight facility sites and buildings	Low
Waste disposal facilities	Low
Administrative office space	Low/Moderate
Commercial and retail activities	Low

There is a range of other airside services that are necessary for passenger and cargo processing but where there is some, albeit limited, discretion as to quality and quantity of service — for example, aerobridges, check-in facilities and baggage handling. This suggests that an airport's market power in these services may be somewhat less than for services provided by aircraft movement facilities but still significant.

The degree of airport market power in relation to aircraft refuelling has been a particularly contentious issue. For some flights and some destinations, there is a degree of discretion as to where an aircraft refuels, but this discretion is limited and, at more remote airports, probably non-existent.

Areas where market power is likely to be more limited include international airline lounges (while some travellers might demand such facilities of some airlines, these seem to be discretionary services, at least with respect to quality and size), catering and freight storage facilities and other services that can easily be located off-airport. Airports (and State Governments) also compete keenly for aircraft heavy maintenance facilities.

While passengers value the convenience of shops and food outlets at airports, the purchase of these services is highly discretionary: they do not have to be consumed as part of the airport 'bundle' and there are many alternatives to buying at the airport. Passengers also have choices in relation to duty-free purchases —

destination, transfer, or origin airports; on-board duty free and downtown outlets; indeed, whether to buy duty-free or not.

Passengers require transport to and from an airport but typically there is a choice among several modes (taxi, self-drive, public transport) that are not provided by the airport. For those who require parking, major airports (eg Sydney, Melbourne, Adelaide) have substantial off-airport competition, at least for long-term (one day or more) parking. Higher parking charges at airports relative to off-airport locations appear largely to reflect greater convenience. The Commission is not aware of private airport operators restricting investment in car parking to raise prices. Indeed, several major airports have undertaken and/or plan major car park expansion. Though, of itself, this does not prove the absence of market power, expansion of on-airport car parks combined with scope for off-airport competition (car parking is not a natural monopoly), suggests that market power is constrained.

Nevertheless, airport operators, by controlling access to their 'front door' could attempt to limit competition from off-airport providers of car parking or other transport providers (eg taxis).

Pricing at unregulated airports

Assessing the likely conduct of airports with market power is prerequisite to assessing whether regulation — and, if so, what form of regulation — is required.

Because key Australian airports (and most major airports overseas) are subject to some form of price and other regulation, there is little hard evidence of the behaviour of large privatised, unregulated airports. (Even in the absence of industry-specific price regulation, general competition laws, international agreements, lease obligations as well as the Airports Act would condition the behaviour of Australian airports.) Hence any conclusions about unregulated pricing behaviour inevitably involve judgements.

While some major Australian airports appear to have significant market power in the core aeronautical services they provide, it is not clear that they have an incentive to use this power in a manner that would bring significant inefficiencies.

- There is fairly strong evidence that non-aeronautical earnings generated by additional passenger throughput provide airports with an incentive to encourage extra passengers to the airport (provided the airport is able to expand throughput). Average earnings (before abnormals, interest, tax, depreciation and amortisation) of about $6.90 per passenger from non-aeronautical activities at Australia's major international airports compare with about $1.55 from aeronautical services. Though there are some issues regarding classification of

earnings (for example, lease payments for domestic terminals are classified as non-aeronautical), and the data do not necessarily give an indication of the incremental earnings from an extra passenger, non-aeronautical activities appear to be of great importance to airports. Evidence from airports suggests that they offer numerous incentives to encourage additional services, and regard high quality as an important factor contributing to passenger spending (box 1).

Box 1 **How airports attract new customers**

'High levels of customer satisfaction drive greater turnover of discretionary expenditure in airports and this is highly profitable.' (Melbourne Airport, sub. 7, p. 9)

'[Airline] market development is expensive and is often recognised as a barrier to entry to new carriers. Melbourne Airport has been in active partnership with successive Victorian Governments in developing markets both to and from Melbourne.' (Melbourne Airport, sub. 7, p. 12)

'… airport operators do price to attract new entrants and small operators, as evidenced by the discounts offered in Sydney Airport's published Conditions of Use.' (Sydney Airports Corporation Limited, sub. 27, p. 55)

- Airports have an incentive to discriminate among users in their pricing in order to increase their profits. Such pricing has the potential to reduce the efficiency losses associated with the use of market power because consumers with a higher elasticity of demand, and for whom airport charges could form a more significant portion of the fare, pay less. Weight-based airport charges (filtered through sophisticated airline yield-management systems), combined with direct encouragement by airports of additional flights and new (low-cost) airline entrants, provide some support for the view that the efficiency losses may not be large even if airports were to exercise their market power.
- To a considerable extent, airports' market power relies on the relatively small effect of an increase in airport charges on ticket prices. But this smallness may provide airports with some incentives to cooperate with other input providers (eg in the tourism and aviation industries), especially if this is likely to reduce demand uncertainty. In other words, airports, by themselves, will have little influence over the attraction of their location, but they may be able to increase demand and/or reduce demand uncertainty by working with other providers who are in a better position to influence demand. This will work against them exercising their market power.
- Airlines and airports hold strongly opposing views on whether airlines have countervailing power (box 2). Available evidence suggests that the scope for competition in the aviation market will limit, though not rule out, this power. Airline market power is likely to be strongest in their dealings with smaller

airports that have less commercial clout and a greater reliance on price-sensitive holiday markets.

Box 2 **Different views on airline countervailing power**

'Adelaide Airport Limited is not able to abuse any market power that it may have in the domestic market as AAL's main customers, Qantas and Ansett, hold significant countervailing market power. Put simply, Qantas and Ansett are much more important for Adelaide Airport than Adelaide Airport is for Qantas and Ansett.' (Adelaide Airport, sub. 20, p. 1)

'Countervailing power can only arise if the buyer has choices available to it … However, if a buyer has no choices other than to purchase goods or services from a particular seller, no countervailing power will arise, no matter how large the buyer is relative to the market. Airlines have no choice but to use the services of airport operators to which customers want to fly.' (Qantas, sub. 48, p. 12)

Overall, however, it is likely that, if prices of core-regulated airports were unregulated, average aeronautical charges would tend to rise above current levels. This is because under the transitional price-cap arrangements, prices continue largely to reflect historical, single-till prices. Buyers of privatised airports were aware of the starting prices and X values (in the CPI-X price caps) when they made their bids, and that prices could be increased as 'necessary new investment' was undertaken. (The existence of these provisions for investment suggests that the starting prices were on the low side required for aeronautical cost recovery.) However, just what investment was eligible for this price adjustment was not clear. Moreover, the initial price-cap regime was to apply for only a five-year 'transitional' period. In short, it appears that some airports may be justified in seeking aeronautical price increases for investment in the future.

How far beyond their cost-recovery level aeronautical prices at airports with market power might increase in the absence of *any* price regulation cannot be predicted, but price increases would be constrained by a range of market forces, including commercial interests of the airports themselves, as outlined above.

Moreover, to the extent that airports can discriminate in pricing, such that charges are allocated across airlines, aircraft and (via airline fare structures) across passengers in a way that roughly reflects passengers' willingness to pay, the net effect on consumption of air travel of a given increase in airport charges is likely to be small.

As for distributional effects, if airports with market power increased their prices above efficient levels, broadly speaking the losers would be passengers (who may

pay higher fares) and airline owners (who may have to accept lower returns). As stated above, the Commission is not in a position to make a judgement about preferred income distributions. However, it makes the following observations:

- there does not appear to be a large difference between income profiles of passengers and airline shareholders on the one hand and airport shareholders (with the latter group including several large Australian superannuation funds) on the other;
- owners of both airports and airlines comprise Australian residents and non-residents; and
- many passengers are not Australian residents.

It is possible, of course, that higher airport charges deter airlines and consumers with the lowest willingness to pay (that is, low-fare airlines and budget-conscious travellers). However, if, as discussed above, airport charges can be levied in such a way that the charges proportionately fall more on those airlines and passengers with higher willingness to pay, then marginal passengers will not be squeezed out.

Capacity-constrained airports (such as Sydney, at least at peak times) would have a far greater ability to increase charges if unregulated and face fewer incentives not to do so. In this case, however, the scope for higher charges does not reflect an abuse of market power — just that market-clearing prices, if allowed to be set, are likely to be high at certain times of day.

While peak prices could increase airport profits, in the case of Sydney Airport they also are likely to promote more efficient use of the airport and have little impact on airfares to and from Sydney. As movement slots are allocated rather than sold, airlines are likely to be benefiting from the scarcity value of slots rather than their passengers who, on average, are already paying higher (fewer discounted) fares to Sydney Airport at peak periods. Higher landing charges at peak times would ensure that, outside the regional ring fence (which protects airport access of regional airlines), those airlines and their passengers who valued the slots most would receive them. However, some passengers travelling on services that are withdrawn or rescheduled to off-peak periods may be made worse off. High airline yields from flights to and from Sydney also may support flights between other cities on which yields may cover marginal, but not average, costs.

Other costs of market power?

Several airline participants considered that airports with market power would allow their costs to increase (at the expense of higher profits). The Commission has not been persuaded by this argument. The problem of owners being able to monitor

managers may not be significantly greater for the larger privatised airports than for firms operating in more competitive markets:

- owners can benchmark an airport against other airports in Australia and overseas, especially those airports that face more intense competition;
- there appears to be competition in the supply of airport management services that owners can purchase. Even with only limited privatisation of airports internationally, specialist airport management companies have emerged (eg Aer Rianta, BAA, Hochtief) that offer their expertise worldwide; and
- given the competitive sale process for airport leases, owners will expect managers at least to deliver returns that were factored into the bid price.

Airlines also have suggested that an airport with market power would allow quality to deteriorate in order to increase their profits. But evidence suggests that airlines and at least some passenger groups (eg business travellers) may be more sensitive to quality than price. Provided an airport can charge higher prices for higher quality, it is unlikely to allow quality to deteriorate. Also, an airport is unlikely to allow quality to deteriorate if it considers this may reduce passenger spending on non-aeronautical services.

Box 3 **Participants' views on possible airport performance in the absence of price control**

'In BARA's view, failing to effectively regulate airport charges will weaken the incentives for airport operators to provide airport services efficiently … In the absence of competition there is scope for productive inefficiencies. Effective regulation, through acting as a surrogate for some of the cost pressures on a firm facing effective competition, can reduce these costs.' (BARA, sub. 41, pp. 29–30)

'Left unregulated, airport operators can be expected to use their market power through monopoly pricing, diminishing service quality and the imposition of unreasonable terms and conditions of access to the airport.' (Qantas Airways, sub. 48, p. 29)

'Airports in an unregulated environment will have strong incentives to consult with their customers on investments and quality outcomes to avoid wasteful investment … while facilitating an optimal level of demand.' (Sydney Airports Corporation Limited, sub. 27, p. 34)

'It is Melbourne Airport's view that the commercial incentives for airports in Australia are such that left alone to deal with users they will pursue pricing and investment policies that are likely to maximise economic welfare in the long run. In contrast, regulatory intervention through price controls is likely to reduce welfare in the long run.' (Melbourne Airport, sub. 7, p. (i))

For similar reasons airlines have suggested that airports with market power would tend to under-invest in order to earn scarcity rents. If an airport can discriminate in pricing, its incentives to under-invest are likely to be reduced. Moreover, if an airport allowed capacity constraints to develop and to remain for lengthy periods (eg by not building an additional taxiway or runway), the door may be opened to potential competitors. There is evidence that international flights to and from Melbourne and Brisbane airports have increased due to the curfew and movement limits at Sydney Airport. Under-investment in capacity and quality enhancement could also reduce commercial revenues.

It is conceivable that market power will be used to deny access to the airport, either by way of higher prices or by imposing unacceptable access conditions. An airport is unlikely to have an incentive to deny access to its customers, the airlines. (On the whole, the response of airports to new entrants seems to confirm this.) But it may have an incentive to deny or frustrate access to potential competitors, such as off-airport car-parking operators, or providers of other forms of transport to the airport.

Assessing the regulatory options

The case for any form of regulation rests on the net benefits it generates compared with other forms of regulation and indeed, no regulation. Though some airports doubtless have significant market power, the Commission considers that the efficiency costs of them exercising that power are not likely to be large, not least because, for reasons outlined above, there appear to be commercial incentives for them not to discourage marginal passengers or airlines from the airport. But is there a form of regulation of airports that could produce better outcomes?

There are numerous regulatory options, several of which already operate in Australia and overseas. These range from cost-based and rate-of-return regulation and price caps, to more light-handed approaches such as price monitoring.

Cost-based and incentive regulation

Cost-based regulation covers rate-of-return regulation and cost-justified price increases (as currently apply under the price-notification regime for Sydney Airport). Incentive regulation usually takes the form of a CPI-X price cap (as for the core-regulated airports).

Price increases based on costs typically provide insufficient incentives for airports to operate efficiently, indeed they may induce airports to operate inefficiently because higher costs can be passed on to users.

Incentive regulation can avoid this problem, at least for the periods during which firms can retain profits, but if prices are not to persist at levels that deliver excessive profits or losses, eventually price caps must be adjusted to allow prices to converge to levels that (just) cover costs. While use of benchmarks can reduce the need to consider costs incurred by the regulated firm, it is unlikely that benchmarking can remove the need for cost assessment altogether. The need for detailed cost assessment at some stage appears inevitable, particularly if price caps are to provide appropriate incentives for investment.

Investment issues have been manifest in current price cap arrangements. Inherited Federal Airports Corporation starting prices that were not adequate to provide for efficient replacement investment on a 'dual-till' basis, were combined with X values that incorporated expected productivity growth and some undefined investments, and (initially) ill-defined investment cost pass-through provisions. At the very least this lack of clarity has promoted excessive gaming, increased compliance costs and discouraged commercial negotiation.

Though some of these problems could have been avoided by a more transparent process and clear guidelines from the outset, price caps that relate prices to the airport's costs generally require intense regulatory involvement in the investment decision-making process. This includes assessments of operating and capital costs, land values, risk, and demand growth.

This involvement arises whether investment is provided for in the starting prices (as in the United Kingdom) or X values, or assessed on an ongoing basis as investment proposals arise (as under current price caps in Australia). Given the substantial conceptual and information problems in asset valuation and cost assessment (assessing the opportunity cost of airport land is especially problematic where different approaches can generate large differences in airport cost assessment and, therefore, allowable prices), the risks of regulatory error correspondingly increase, along with compliance costs.

Accordingly, the Commission considers that price caps should be reserved for situations where excessive pricing is likely to result in significant inefficiency.

Single or dual till?

Under a single till, revenues from non-aeronautical services are subtracted from expected airport-wide costs in order to determine allowable revenue from, and prices for, aeronautical services. Under a dual till, aeronautical services are priced on a 'stand-alone' basis. Leases for privatised core-regulated airports were sold with an undertaking that a single till would not be mandated. It appears that Sydney

Airport will be sold on the same basis. Nonetheless, most airline participants have urged that price regulation be imposed on a single-till basis.

The Commission recognises that there are some arguments for cross subsidising aeronautical services from locational rents earned in non-aeronautical services (but then only at airports without capacity constraints). However, the longer-run disincentive effects imposed by a single till on airport development of both aeronautical and non-aeronautical services could generate large efficiency losses. Indeed, reversion to a single till could stifle the risk-taking, innovation and development regarded as major benefits of privatisation. In view of commitments made to airport buyers regarding commercial opportunities at airports, and the large amounts airport operators claim they paid to the Commonwealth Government for these opportunities, it also would raise issues of sovereign risk.

Price monitoring

Price monitoring can provide an alternative to price caps or rate-of-return regulation. Though firms may be required to provide information on, for example, prices, costs and profits, there is no direct regulatory control over prices charged or revenues or profits earned. The impact of monitoring on firms' pricing decisions is through moral suasion, publicity, and a credible threat of reintroduction of stricter forms of price regulation. Monitoring can be a less explicit or intrusive method for regulating prices than price caps or cost-based regulation, though it may have similar effects on pricing and costs.

Perhaps most importantly, price monitoring has potential to encourage commercial negotiation between airport operators and users and reduce 'gaming' of the regulatory system, provided there is no immediate and automatic recourse to regulatory determination of prices. If a breakdown in negotiations about airport prices constituted grounds for re-regulation, this could undermine negotiated agreements if one party considered it could do better with regulation.

On the other hand, the potential for abuse of market power may be greater under a price-monitoring regime than under price caps or cost-based regulation. Such potential may be constrained by a well-defined and credible threat that the Government could reintroduce stronger regulation, such as price caps, at airports where market power clearly was abused. Monitored firms, however, would need to be given clear guidance as to what constituted good behaviour and what did not. A broad set of principles might be preferable for guiding good behaviour than specific criteria that, applied in isolation, may not be consistent with efficient outcomes.

Access provisions and general competition law

Airport operators currently are subject to section 192 of the Airports Act and Part IIIA of the Trade Practices Act (TP Act), while anti-competitive practices are subject to Part IV of the TP Act. Though the five-year, automatic declarations of privatised, core-regulated airports cannot be renewed under section 192 as it currently stands, new airport-specific access arrangements or Part IIIA could continue to complement any future price regulation of airport services or, indeed, provide an alternative to an industry-specific price-regulation regime. Prices of airport services could be regulated indirectly through regulation of the terms and conditions of access to an airport service if a service were declared.

Airports may have some incentives to deny access where the airport directly competes in the market for the service or can control competition in a market though its control of access to the airport facility in question. However, the Commission has not been persuaded that there is a case for continuation of *special* access provisions for airports that impose weaker declaration criteria for airports than other industries.

Promoting commercial agreements and undertakings

Several participants, including several airports and Ansett, have suggested various 'midway' approaches where airports and airlines would enter commercial agreements on prices, quality and conditions of access, within a regulatory framework. While there is scope for undertakings under Part IIIA, most participants suggested an alternative industry-specific approach. The Commission has asked participants to flesh out their proposals, particularly in regard to the regulatory framework.

The notion of promoting commercial agreements has immediate appeal as such agreements could circumvent the need for high levels of regulatory involvement. However, the Commission considers that, to be successful, any such agreements necessarily must be negotiated voluntarily, without automatic recourse to the regulator and without prescriptive requirements. Guidelines for such agreements (including consultation and model dispute-resolution mechanisms) might promote such arrangements, as would an indication that the agreements would be regarded as 'good behaviour' by airports.

That such guidance may be helpful for commercial entities in a commercial environment may perhaps be surprising, but it reflects 'natural monopoly' characteristics, the pervasive effects of regulation, the historical ownership of airports and airlines, and the easy politicisation of issues in the industry.

The Commission's assessment and preferred approach

Major Australian airports — Sydney, Melbourne, Brisbane and Perth — have significant market power in core aeronautical services. Some other capital city airports — Adelaide and Canberra and, to a lesser extent, Darwin — would seem to have a moderate degree of market power, but the remaining core-regulated, and non-core-regulated, airports appear to have much less market power.

This suggests that some form of price regulation is required for the four largest airports, though Sydney Airport raises some special issues that are discussed below. The Commission is not convinced that Adelaide, Canberra, and particularly Darwin, have significant market power and, indeed, they may be comparable with Cairns Airport (the sixth-largest in Australia, albeit State Government-owned) which is not subject to any price regulation. However, some form of monitoring may be appropriate for these smaller airports for the time being as a transitional measure.

The remainder, because they appear to have much less market power, should not be subject to any airports-specific economic regulation including price monitoring. (They would continue to be subject to the TP Act and Airports Act.)

The Commission considers that two possible regulatory options merit consideration. The first essentially preserves the status quo for airports with significant market power (but with some improvements to the regulatory regime) and replaces price caps with new price-monitoring arrangements for Adelaide, Canberra and Darwin airports. The second accelerates progress along the path towards a more commercially-oriented approach, as envisaged when the airports were privatised. Before outlining these options, Sydney Airport raises some special issues.

Sydney Airport

Though there will be excess demand for some facilities at all airports from time to time, a small land site (and no room for major expansion), plus a movement cap and a curfew on aircraft movements, and the regional 'ring fence' together mean that Sydney Airport has excess demand for several hours a day. While Sydney Airport has significant market power, these capacity constraints effectively mean that Sydney has little incentive, or need, to exercise market power as such.

Currently there seems to be scope at Sydney Airport at peak times to raise prices significantly above current levels, and thereby promote more efficient use of the airport, even after increases of the order of 100 per cent in 2001. Though prices pressing towards market-clearing levels at peak times are likely to promote use of the facility by those who value it most even if ring-fenced regional flights were

quarantined from price increases, the airport could earn large profits, reflecting the scarcity value of slots. This would be more at the expense of airlines than passengers flying to and from Sydney at peak times as the scarcity value of the slots appears likely to be factored into fare structures already, through the scarcity of discounted fares at peak times.

Moreover, given the massive investment required to establish a second airport and the need to encourage passengers and airlines to use it once it is built, higher prices at Sydney Airport may be required to signal to users the opportunity costs of using that conveniently-located facility.

Of course, if higher prices charged by Sydney Airport at peak times were anticipated at the time of sale of the airport, these scarcity rents largely would accrue to the Commonwealth Government on behalf of taxpayers.

Though there are strong economic arguments in favour of prices reflecting the value and opportunity costs (including congestion costs) of using that facility, any such decision also will be guided by potential distributional effects of higher charges on those who might forfeit peak period access. (Services on some other routes also may be affected if average costs of these flights are being covered by higher airline yields on Sydney routes.)

But whatever the decision about appropriate future policy at Sydney Airport, for that policy to be factored adequately into the sale price, bidders must be given clear guidance about the regulatory framework that will apply to the airport. The need for such clarity is underscored by the uncertainty and disputation that has been associated with the lack of transparency and specificity of the current price-cap regime applying to core-regulated airports already privatised.

Option A: Modified status quo

Option A provides for a cautious pace of change. It comprises:

- a CPI-X price cap for Melbourne, Brisbane and Perth airports only;
- for Sydney Airport, for reasons discussed above, preferably regulatory arrangements that allow aeronautical prices that reflect opportunity costs incurred by airlines and their passengers of using the facility rather than costs of production incurred by the airport. If for distributional reasons this is not acceptable, at the very least, current aeronautical prices should not decline in real terms and should be adequate to encourage efficient, feasible expansion of aeronautical capacity at that facility. At most there could be price notification for aeronautical price increases above the CPI. Price increases should be allowed to reflect peak period demand and to accommodate investment;

- for Melbourne, Brisbane and Perth airports (and Sydney if it is subject to price notification or other regulation), aeronautical price regulation should be applied on a dual-till basis where the till incorporates only those aeronautical services in which the airports are likely to have significant market power (this probably would include refuelling services but not other services currently designated as aeronautical-related, such as car parking or check-in counters). Profits earned in non-aeronautical activities, such as retailing or car parking, should not be taken into account in setting price caps or determining allowable price increases;
- where any of these airports exercise significant market power in any non-aeronautical or aeronautical-related activity, separate regulation might be appropriate (eg price monitoring). Based on the evidence so far, the Commission considers that car-parking and taxi-parking services should *not* be subject to explicit price regulation and should not be included in an aeronautical price cap or cost pass-through provisions;
- for those airports subject to a price cap, because of information requirements, intense regulatory involvement and various incentives for inefficient behaviour, there does not appear to be a clear-cut case in favour of either a CPI-X model that incorporates all investment in the starting prices or Xs (along the lines of the UK model), or one that deals with investment on an ongoing basis (as currently operates in Australia). But whichever approach were adopted, it should not hold prices below levels required for efficient investment. Further, to reduce gaming, at the commencement of the regulatory period all parties must be informed precisely how different types of investment are to be accommodated within the price cap;
- Adelaide, Canberra and Darwin airports to be subject to new price monitoring arrangements (as outlined below in Option B) rather than price caps, with no airports-specific economic regulation of remaining core-regulated airports;
- quality monitoring to continue at all airports subject to price caps or monitoring; and
- access provisions for airports that mirror the generic declaration criteria in the Part IIIA national access regime. An airports-specific access regime should continue only if procedural improvements, such as scope for multilateral arbitrations, are not made to the Part IIIA national access regime.

Option B: Continuing reform

This option would extend lighter-handed regulation to *all* major airports for a *probationary* period, specifically:

- mandatory price monitoring by the ACCC of airports assessed as having moderate to significant market power: namely Sydney, Melbourne, Brisbane, Perth, Adelaide, Canberra, and Darwin airports. The monitoring regime would continue for five years. During this *probationary* period, the regulator would not have the power to alter the monitoring regime or impose stricter price regulation. Indeed, the success of the monitoring regime would rely on all parties to the regulatory 'contract' accepting that there will be no easy recourse to regulated outcomes or to reintroduction of stricter regulation during the designated period;
- information requirements that would be specified at the commencement of the period and that could not be amended. The (audited) information would include prices of aeronautical services, and revenues, operating and capital expenses, various earnings measures, and quality indicators, for both aeronautical and non-aeronautical activities. An annual report presenting all monitored information would be made publicly available, with commentary by the ACCC (and auditors) where it was considered warranted, but without overall assessment of the success or otherwise of monitoring;
- encouragement of voluntary commercial agreements by providing guidelines regarding coverage, consultation and dispute-settlement mechanisms;
- guidelines for what would be regarded as 'good behaviour' by airports and airlines;
- an independent, public review (not by the regulator) towards the end of the five years to ascertain the need for any future price regulation (including price monitoring or more stringent price regulation); and
- as for Option A, access provisions for airports that mirror the generic declaration criteria in the Part IIIA national access regime. An airports-specific access regime should continue only if procedural improvements, such as scope for multilateral arbitrations, are not made to the national access regime. However, the Commission would recommend that declaration of core airport facilities for access purposes should not proceed unless the Minister was of the view that the monitoring regime demonstrably, and irrevocably, had failed and that the airport's behaviour was such as to be causing significant efficiency losses.

Preferred approach

The Commission has not been persuaded that there is a strong case for continuing strict price control (viz price caps) for any privatised core-regulated airports, for the following reasons:

- price caps almost inevitably entail intense regulatory assessment of, and involvement in, investment decisions and therefore should be used only where the efficiency costs of abuse of market power are significant;
- though some of these airports have market power, the case that they will act as monopolists that bring significant economic inefficiencies in the absence of strict price regulation has not been established — there appear to be strong commercial incentives, including the scope for increased profits in non-aeronautical activities from increasing passenger volumes, pulling in the other direction; and
- while the Commission agrees that some transitional problems with current price-cap arrangements may have been settled, the risk of regulatory failure — which could be said to go with the territory of price caps — remains high. Compliance costs also are likely to remain high.

By confining price-cap regulation to those airports considered to have the most significant market power, and also by requiring clarity in the setting of caps regarding treatment of investment, Option A would, in the Commission's view, generate some net benefits compared with current regulatory arrangements.

But the Commission considers that Option B offers a much better opportunity for promoting the principles for regulation outlined in the terms of reference — efficient operation of airports, commercially-negotiated outcomes, minimal compliance costs, targeting of those airports and services where operators have the most potential to abuse market power, facilitation of benchmarking comparisons, and promotion of competition in the provision of services within airports.

This recommendation rests on a judgement about likely behaviour of major airports. Thus, during the proposed five-year probationary period, the onus largely will rest on regulated airports to demonstrate their willingness to operate without abusing market power. Equally, strategies on the part of airlines aimed at undermining the regulatory regime should not be rewarded with stricter price controls in subsequent periods. In this regard, the proposed length of the monitoring period is crucial. If it were too short, some parties might be encouraged not to deal in good faith, in order to increase the likelihood of re-regulation. If it were too long, airports with market power might have an incentive to make use of that power. The Commission's preliminary view is that five years would achieve about the right balance.

Parties should be given guidance as to what is acceptable conduct and what is not and will be encouraged to negotiate commercial agreements. While guidelines for such agreements should not be prescriptive, the Commission sees a role for formal guidance to assist all parties. Nonetheless, defining such behaviour may be difficult — high prices may be a signal that new investment is required rather than an indication that monopoly prices are being charged, high profits might reflect entrepreneurial skills rather than market power, and increases in prices may simply reflect changes in costs or that prices previously were too low. In a congested airport, high prices may be a means to allocate the available capacity efficiently. This suggests that a broad set of principles might be preferable for guiding good behaviour than specific criteria that, applied in isolation, may not be consistent with efficient outcomes.

While some participants have questioned whether commercial negotiations are feasible in this industry, the Commission notes that airlines deal directly with numerous unregulated privately- and publicly-owned smaller airports and some larger ones (eg Cairns). This is not to say that relations always will be smooth, just that there seems to be scope for reasonably normal commercial relationships between airports and users, provided there is some effective, ultimate constraint on abuse of any market power.

The Commission accepts, however, that some parties may find this shift difficult, particularly given the long history of government provision of airport services at major airports and pricing structures which effectively subsidised aeronautical charges. Even if price caps were to continue to operate, aeronautical charges are likely to increase to some degree if a dual till is to apply in future.

The Commission also draws attention to the continued application of access provisions and Part IV of the TP Act to airports. These provisions, especially access provisions, would provide a quite powerful deterrent to excessive pricing by airports and, indeed, engagement in any other anti-competitive practices. Potential declaration for access purposes also should encourage airports to enter into agreements regarding prices and conditions of airport use.

While Option B is the Commission's strongly preferred approach, it accepts that this would involve a considerable shift from current arrangements, albeit a shift largely envisaged by the architects of the current regulations at the time of airport privatisations. Importantly, the Commission considers that the full benefits of privatisation of airports are unlikely to be realised if commercial relationships between airports and airlines continue to be heavily influenced, and possibly constrained, by strict price regulation.

In particular, the Commission considers that the ongoing need for substantial investments at major airports requires a more commercial and cooperative approach. Regulation that constrains prices at low levels could impose large costs on consumers in the longer term. The Commission considers that Option B is more likely to promote the long-term interests of consumers.

Accordingly, the Commission's draft recommendation is for implementation of Option B.

Draft recommendation and findings

Draft recommendation

DRAFT RECOMMENDATION 12.1

The Commission recommends that a new industry-specific monitoring regime be introduced for major airports for a probationary period, comprising:

- ***mandatory price monitoring by the ACCC of Sydney, Melbourne, Brisbane, Perth, Adelaide, Canberra, and Darwin airports. The monitoring regime should continue for five years. During this probationary period, the regulator should not have the power to alter the monitoring regime or impose price regulation;***
- ***specification of information requirements at the commencement of the period. These requirements should not be amended during the period. The (audited) information should include prices of aeronautical services, and revenues, operating and capital expenses, various earnings measures, and quality indicators, for both aeronautical and non-aeronautical activities. An annual report presenting all monitored information should be made publicly available, with commentary by the ACCC (and auditors) where considered warranted, but without overall assessment of the success or otherwise of monitoring;***
- ***encouragement of voluntary commercial agreements by providing guidelines for coverage, consultation and dispute-settlement mechanisms;***
- ***guidelines for what would be regarded as 'good behaviour' by airports and airlines;***
- ***provision for an independent, public review (not by the regulator) towards the end of the five years to ascertain the need for any future price regulation (including price monitoring or more stringent price regulation); and***
- ***access provisions for airports that mirror the generic declaration criteria in the national access regime in Part IIIA of the Trade Practices Act 1974. An airports-specific access regime should continue only if procedural improvements, such as scope for multilateral arbitrations, are not made to the national access regime. Declaration of core airport facilities for access purposes should not proceed unless the Minister was of the view that the monitoring regime demonstrably, and irrevocably, had failed and that an airport's behaviour was such as to be causing significant efficiency losses.***

Draft findings

This section draws together all draft findings contained in this report. The draft findings are listed under the relevant chapter.

Chapter 5 Market power of airports

DRAFT FINDING 5.1

Of the core-regulated airports, Sydney, Melbourne, Brisbane and Perth have most market power. Canberra, Adelaide and Darwin are likely to have a moderate degree of market power. Core-regulated airports that do not appear to have significant market power (due mainly — except for Townsville — to the scope for effective inter-airport competition) are: Alice Springs, Townsville, Launceston, Hobart and Coolangatta.

Chapter 6 Market power in particular airport services

DRAFT FINDING 6.1

For those airports with moderate to significant market power, the degree of market power varies across the services provided. It appears to be most significant in aircraft movement facilities, vehicle access, some forms of passenger processing facilities and aircraft refuelling. With respect to aircraft refuelling, market power appears to be most significant at Perth, Brisbane and Sydney airports.

Where service providers potentially compete with the airport in the provision of services, access may be an issue if the provider requires access to the airport site.

Chapter 7 Conduct of unregulated airports

DRAFT FINDING 7.1

Profits from non-aeronautical activities at most core-regulated airports appear significant, especially when compared with current earnings from regulated aeronautical charges. Though this earnings disparity might be expected to narrow somewhat if price regulation of aeronautical services were removed, there is an incentive for airports to temper prices (particularly prices for new-entrants) for aeronautical services, improve quality and/or increase aeronautical capacity in order to encourage passenger growth.

DRAFT FINDING 7.2

Airlines' countervailing power against airports appears limited. However:

- *differences in airline network structures, combined with scope for airport substitution in some locations and for some market segments;*
- *the ability of airlines to threaten selected reduction of services that deliver relatively high returns to airports; and*
- *the superior commercial strength of major airlines relative to smaller airports, in particular*

suggest that airlines do possess a degree of countervailing power, though this will differ from airport to airport.

DRAFT FINDING 7.3

The ability of airlines to discriminate in pricing in a quite sophisticated manner, coupled with aircraft weight-based charges levied by most airports, and low entry prices for marginal flights and new airlines, may reduce the efficiency impact of airport charges set above marginal cost, whether or not these charges are above efficient cost-recovery levels.

DRAFT FINDING 7.4

At capacity-constrained facilities (where the shortage of capacity is not created or perpetuated by the airport) efficient pricing requires that capacity is rationed such that consumers with higher valuations of the service obtain access. Airports not subject to price regulation generally will have an incentive to price efficiently in these circumstances.

DRAFT FINDING 7.5

Aeronautical charges at some airports at least could be expected to rise in the absence of price regulation, in part because current charges will not cover the costs of investment. Whether prices rise above efficient levels, due to exercise of market power, cannot be predicted. However, there appears to be reasonably strong evidence that a range of market influences will moderate the degree of excessive pricing and any negative efficiency effects of such pricing. Chief amongst these are the effects of non-aeronautical earnings and scope for price discrimination so that marginal airport users are not discouraged.

Airport charges above (efficient) costs will redistribute income from airlines and their passengers to airports. The burden of higher charges is likely to fall on both Australian residents and non-residents and relatively more on passengers with inelastic demands (due to price discrimination by airports and airlines).

DRAFT FINDING 7.6

It would appear unlikely that managers of a privatised airport with market power would have much scope to relax with regard to costs.

DRAFT FINDING 7.7

Efficiency in airport investment and quality provision largely will mirror the airport's pricing efficiency.

DRAFT FINDING 7.8

An airport with market power may have some incentive to restrict access to the airport, especially 'front-door' access to off-airport providers of competing services such as car parking, or providers of competing transport modes. However, the exercise of such power is likely to be limited.

Chapter 8 Assessment of current price regulation: price-cap and price-notification arrangements

DRAFT FINDING 8.1

The single-till basis of the starting prices (also incorporating some cross subsidies between airports), and the real declines in aeronautical prices at most airports under the price cap suggest that, for many airports, aeronautical prices at the end of five years of the CPI-X regime may be below the level necessary to justify future aeronautical investment.

DRAFT FINDING 8.2

To date, the necessary new investment provisions largely have not achieved the commercially-negotiated outcomes that were envisaged by the architects of the regime. Partly this has been due to the need to develop criteria and procedures for necessary new investment after purchase and for participants to adapt to the very different business environment following airport privatisation.

However, the observed difficulties also appear to indicate some fundamental problems, in particular:

- *the incentives for some participants to use the regulator rather than achieve commercially-negotiated solutions;*
- *the lack of transparency regarding what investment was considered to be included in the base aeronautical prices and what was to be covered by necessary new investment, with resultant effects on incentives to invest;*

- *the high costs of complying with the regime; and*
- *the regulatory risk introduced by the need to have every investment-related price increase vetted by the regulator.*

DRAFT FINDING 8.3

The aeronautical price increases implemented at Sydney Airport place its pricing on a fundamentally different (dual-till) basis from that at other core-regulated airports. The significant range of possible outcomes for a number of cost parameters (for example, land values, cost of capital) indicate the imprecision surrounding regulatory price setting. The excess demand at Sydney Airport at peak times suggests that cost-related or rate-of-return regulation is not appropriate in setting aeronautical charges.

Chapter 9 Assessment of current regulation: price monitoring, quality monitoring and access regulation

DRAFT FINDING 9.1

The overall quality of service provision by airport operators at monitored airports does not appear to have deteriorated since monitoring commenced. This outcome reflects to a large extent the commercial incentives airport operators have not to reduce service quality.

Although there are some problems with the ACCC monitoring process, it provides transparency of reporting and facilitates some comparison between airport operators at relatively low cost.

DRAFT FINDING 9.2

Though privatised core-regulated airports have facilitated access for new entrant airlines, airports-specific access provisions (section 192) do not appear to have been instrumental in achieving this outcome.

Chapter 10 Regulatory options: cost-based and incentive regulation

DRAFT FINDING 10.1

Incentive regulation has some advantages over cost-based regulation. However, given the tendency of price caps to converge towards cost-based regulation (with associated high levels of regulatory involvement and risks of regulatory error, and the consequences of these for investment and long-term provision of services),

price-cap regulation should be implemented only when there is clear evidence that, without such regulation, economic efficiency would be seriously impaired.

In addition, where price caps are implemented, the approach adopted for investment should be spelled out clearly and transparently to all relevant parties in order to reduce the risk of inefficient outcomes and excessive gaming.

DRAFT FINDING 10.2

The Commission considers that, if price-cap regulation were considered warranted, the cap should apply only to those aeronautical services in which the airport has significant market power. Profits earned in non-aeronautical activities should not be taken into account in setting this price cap.

If an airport exercises significant market power in any non-aeronautical activity, separate price monitoring or other regulation might be appropriate.

Chapter 11 Regulatory options: price monitoring, access provisions and general competition law

DRAFT FINDING 11.1

Price monitoring has potential to reduce compliance costs, promote commercial negotiation and reduce incentives for gaming of the regulatory system. If there is no scope for day-to-day regulatory intervention in firms' pricing, the risk of regulatory failure may be reduced and efficient outcomes promoted. But if it is highly intrusive it could have high compliance costs and reduce efficiency. To provide an effective restraint on the exercise of market power, price monitoring must be supported by a well-defined and credible threat that stricter forms of price regulation could be introduced.

DRAFT FINDING 11.2

There do not appear to be any grounds for airports-specific access arrangements that set lower declaration thresholds than Part IIIA. An industry-specific regime that allowed for multilateral arbitrations might be warranted if such arbitrations were not provided for in the national access regime.

DRAFT FINDING 11.3

Facilitation and encouragement of commercial agreements between airport operators and users has the potential to promote commercial relationships and efficient outcomes. Though undertakings could be developed under Part IIIA (once current declarations expire), an industry-specific approach may be more appropriate.

Requests for information

The Commission welcomes information from participants that enables further analysis of the market power of airports in particular services provided by or at airports. (Chapter 6)

The Commission would welcome comments from participants about the rationale for passenger-based charging by airports and its likely ramifications for airfares and efficiency. (Chapter 7)

Additional evidence is sought from participants in relation to draft finding 7.5. (Chapter 7)

The Commission is interested in participants' comments on the default price-cap option. (Chapter 10)

While the Commission considers that promotion of commercial agreements has many attractive features, further input from participants is invited as to how such agreements might be implemented including, in particular, the appropriate regulatory framework. (Chapter 11)

The Commission seeks participants' views regarding criteria for 'good behaviour'. (Chapter 12)

1 Introduction

This chapter sets out and clarifies the terms of reference, provides background to this inquiry, and outlines the Commission's approach to the inquiry.

1.1 Terms of reference

The Commonwealth Government has asked the Productivity Commission to report on whether there is a need for price regulation of airports, and the appropriate form of any price regulation. The terms of reference for the inquiry are reproduced at the beginning of this report.

The terms of reference state that the purpose of the inquiry is to:

> … examine whether new regulatory arrangements, targeted at those charges for airport services or products where the airport operator has been identified as having most potential to abuse market power, are needed to ensure that the exercise of any such power may be appropriately counteracted.

In so doing, the Commission is to take into account several principles, the first of which states:

> The CPI-X price cap applied to aeronautical charges during the first five year period of private ownership will no longer operate. (terms of reference, para. 7(a))

Shortly after commencement of the inquiry, the Commission wrote to the Assistant Treasurer seeking clarification of paragraph 7(a) of the terms of reference. In its letter the Commission stated:

> The Commission understands that Paragraph 7(a) essentially conveys the Government's intention that the current price cap arrangements for Phase I and II airports will cease after five years of operation. It is also our view that paragraph 7(a) is not intended to preclude from consideration price cap arrangements of the general form of CPI-X as an option for future prices regulation of airport services, should some form of prices regulation be regarded as appropriate.

The Commission sought confirmation from the Assistant Treasurer that this general approach to price regulation could be considered as one of the range of options where there is most potential for abuse of market power. The Commission's understanding of paragraph 7(a) was confirmed by the Assistant Treasurer in correspondence to the Commission (appendix A).

Other principles that the Commission is to take into account include that price regulation should:

- be applied to those aeronautical services and to those airports where airport operators have most potential to abuse market power;
- minimise compliance costs on airport operators and the Government;
- promote the efficient operation of airports; and
- facilitate benchmarking comparisons between airports, competition in the provision of services within airports, and commercially negotiated outcomes in airport operations.

1.2 Background to the current inquiry

In 1997, the Commonwealth Government commenced the sale to private operators of long-term leases (50 years with an option to renew for a further 49 years) for 17 of the 22 airports operated at the time by the Federal Airports Corporation (FAC) (figure 1.1).

Leases were granted to private sector operators at Brisbane, Melbourne and Perth airports in 1997 (Phase 1), and for a further 14 airports in 1998 (Phase 2). They were: Adelaide, Alice Springs, Canberra, Coolangatta, Darwin, Hobart, Launceston, Townsville, Mount Isa, Tennant Creek, Archerfield, Jandakot, Moorabbin and Parafield airports. The remaining five federal airports (the four Sydney basin airports (Sydney (Kingsford Smith), Bankstown, Camden and Hoxton Park) and Essendon Airport were leased but not privatised — their ownership transferred to two wholly government-owned companies in 1998. The FAC subsequently ceased operation.

The sale of Essendon Airport is scheduled for completion in September 2001 and Sydney (Kingsford Smith) Airport is expected to be sold in the second half of 2001. The three other Sydney basin airports are to be sold in the second half of 2002.

Twelve of the 22 leased airports are collectively known as 'core-regulated' airports because they are subject to price regulation under the *Prices Surveillance Act 1983*. These comprise Sydney (Kingsford Smith) Airport and 11 privatised airports (all Phase 1 airports (Brisbane, Melbourne and Perth) and eight of the Phase 2 airports (Adelaide, Alice Springs, Canberra, Coolangatta, Darwin, Hobart, Launceston and Townsville). They are characterised by significant interstate and, in some cases, international regular public transport services.

Figure 1.1 **Airports leased from the Commonwealth Government[a]**

[a] FAC airports at end 1996.

Price regulation of core-regulated airports includes prices notification, price monitoring, price-cap arrangements and special provisions for necessary new investment at airports. These airports, and indeed all 22 leased airports, are also subject to regulation under the *Airports Act 1996* and the *Trade Practices Act 1974*.

In 1996, the then Department of Transport and Regional Development described the pricing oversight arrangements as transitional measures, designed to allow airport operators, users and the Government regulator time to adjust to the new operating environment for airports (DoTRD 1996). It was envisaged that pricing arrangements would change after experience was gained in the new operating environment. As such, a review of the pricing arrangements was a key feature of the privatisation program developed by the Commonwealth Government.

> The review will be based on the premise that the price cap applied to aeronautical charges during the first five years will no longer operate. In its place, the review will aim to develop arrangements targeted at those charges where the airport operator has most potential to abuse market power. The existing set of aeronautical charges will be

examined, on an airport-by-airport basis, with the review assessing whether services should be added or removed from surveillance. (DoTRD 1996, p. 7)

The review was to be completed before the end of the first five-year period of the leases.

The Commonwealth Government subsequently decided that the review would be undertaken by the Productivity Commission, rather than by the Australian Competition and Consumer Commission as foreshadowed in the Government's Pricing Policy Paper issued in 1996 (DoTRD 1996) because:

> There are strong synergies between this review and the Productivity Commission's current review of the *Prices Surveillance Act 1983*, which provides the framework within which airport prices are regulated. There are also synergies with its current reviews of telecommunications specific competition regulation and access arrangements under Part IIIA of the *Trade Practices Act 1974*. (Kemp R., Assistant Treasurer, 2000)

1.3 The Commission's approach

The Commission's approach takes into account the terms of reference for this inquiry and the general policy guidelines in the *Productivity Commission Act 1998*. Although this inquiry is not a legislative review under the requirements of the Competition Principles Agreement (CPA), the principles embodied in this agreement apply. The terms of reference for this inquiry broadly reflect the CPA.[1]

In considering the issues and formulating its draft recommendations, the Commission has also taken into account previous Productivity Commission reports and current inquiries, in particular those noted above by the Assistant Treasurer.

The Commission's approach, in broad terms, has been to:

- identify the objectives of price regulation;
- assess whether there is a need for price regulation of airport services by:
  - identifying which (if any) airports possess market power, and the potential to abuse it;
  - identifying those services in which they may possess market power; and
  - assessing the likely extent and potential impacts of abuse of market power by airports, including efficiency and distributional effects.

1 In 1995, the CPA was signed by the Commonwealth, States and Territories as part of the National Competition Policy reform package. The CPA, in essence, sets out the principles to be followed by governments in relation to the agreed competition policy reforms.

- assess the costs and benefits, including efficiency and distributional effects, of current price regulation;
- identify options for future price regulation, taking into consideration pricing regulatory arrangements in other countries, and analyse the costs and benefits, including efficiency and distributional effects, of those options; and
- assess what form of price regulation is required, if any.

Scope of the inquiry

As noted above, the terms of reference ask the Commission to report on whether 'there is a need for price regulation of airports, and the appropriate form of any price regulation'.

In other words, the terms of reference do not constrain the Commission to considering only those airports currently subject to price regulation, that is, core-regulated airports. Other airports include those leased in Phase 2 but not subject to price regulation, regional airports with regular public transport services, and smaller general aviation airports. Nonetheless, the inquiry will focus on whether there is a need for continued price regulation at core-regulated airports and, if so, its appropriate form.

Sydney Airport, leased but not yet privatised, is not subject to the price-cap arrangements of other core-regulated airports. As a core-regulated airport, it is, however, currently subject to other forms of price regulation, and is therefore included in this inquiry.

Although the regulatory focus is on price regulation under the *Prices Surveillance Act 1983*, other regulations are considered in so far as they affect, directly or indirectly, the prices of services provided by airports. Examples of such regulation are the *Airports Act 1996*, the *Trade Practices Act 1974*, environmental regulations, and international aviation agreements.

Draft report structure

The airport business in Australia, particularly at core-regulated airports, is described in chapter 2. Chapter 3 describes the current regulatory environment affecting the operation of Australian airports, focussing on price regulation and access arrangements. The possible rationales for future price regulation of airport services, together with principles of good regulation and efficient pricing of airport services, are discussed in chapter 4. Chapters 5 and 6 examine potential sources of market power of airports, and the extent to which market power exists for particular

airports (chapter 5) and services (chapter 6). In chapter 7, the possible pricing and other behaviour of airports, were they to operate without price regulation, is considered, along with potential efficiency and distributional effects of such behaviour. Chapters 8 and 9 evaluate the performance of the current framework for regulating prices: price-cap and price-notification arrangements are assessed in chapter 8, and price monitoring, quality monitoring and access regulation are addressed in chapter 9. Options for future regulation of airport services are discussed in chapters 10 (cost-based and incentive price regulation) and 11 (price monitoring, access and anti-competitive conduct). Chapter 12 draws together the preceding chapters and outlines the Commission's preferred approach for future price regulation of airport services.

1.4 Conduct of the inquiry

The terms of reference for this inquiry were received on 21 December 2000. The inquiry is to be completed within 12 months — that is, by 21 December 2001.

As required by the terms of reference, and in line with normal Commission inquiry procedures, the Commission has encouraged maximum public participation. Soon after receipt of the terms of reference, advertisements were placed in the national press and a circular was sent to a range of individuals and organisations thought likely to have an interest in the inquiry. An issues paper was released in early January 2001 to assist participants in preparing their initial submissions.

The Commission held informal discussions with organisations, companies, and individuals to seek information and canvass a wide range of views. A list of those with whom discussions were held is set out in appendix B. Fifty submissions were received in response to the issues paper (appendix B). All non-confidential parts of submissions were made available on the internet, at Commission and State libraries, and from Photobition Digital Imaging Centre. The Commission thanks participants for their participation in meetings with Commissioners, in public hearings and for their submissions.

Interested parties will have the opportunity to respond to matters raised in this draft report by way of written submissions and at public hearings to be held in October 2001. The Commission will review the draft report in light of these comments and incorporate any new information before submitting its final report to the Commonwealth Assistant Treasurer in December 2001.

Professor Richard Snape (Presiding) and Dr Neil Byron are the Commissioners for this inquiry.

2 Australian airports and their markets

This chapter provides an overview of the airport business, particularly at core-regulated airports. The services and facilities provided at airports by airport operators, and others, are examined. Revenues, charges, costs and profitability of core-regulated airports are assessed in detail. Demand characteristics of the services provided by Australian airports are also discussed. Where relevant, the situation at Australian airports is compared with major airports overseas.

2.1 Airport facilities and services

Airports supply a range of products, but their primary function is to provide for planes to land and depart and to facilitate the interchange of passengers and freight between air and surface transport. Airports range in size, the scope of services provided and the markets served. They serve international, domestic, regional and general aviation markets.

Airport facilities

Airports comprise a combination of landside and airside facilities. Landside facilities cover terminals and the infrastructure within them, including flight information display systems, check-in counters, public amenities, and lounges for passengers. Terminals also provide space for offices, and for commercial operations such as car hire, retail, and food and beverage activities.

In addition, landside facilities encompass facilities outside the terminals, such as perimeter roads, car parks, and taxi, bus and rail points linked to terminals by walkways.

Airside facilities include runways, taxiways and aprons as well as airfield lighting, aircraft parking bays, visual navigation aids, hangars, freight terminals and facilities for aircraft maintenance and refuelling, and in-flight catering.

Airport services

Of the range of services provided at airports in most OECD countries only a small number is directly supplied by the airport operator (section 2.3). The services and activities provided at airports can be divided into three groups: essential operational services, handling services and commercial activities (Doganis 1992).

Essential operational services

Essential operational services are concerned primarily with ensuring safety of aircraft and airport users. These include:

- air traffic control and meteorological services;
- runway, building and aircraft maintenance services;
- communications, security, and fire and medical services; and
- aircraft movement services for the runways, taxiways and aprons, such as nose-in guidance and marshalling.

Handling services

Handling activities cover services directly associated with the aircraft itself — sometimes referred to as ground handling — and include:

- cleaning and catering;
- provision of power and fuel; and
- loading or unloading of baggage and freight.

Also commonly classified as handling activities are services associated with the various stages of processing passengers, baggage and freight through the respective terminals and on to the aircraft. These services include:

- baggage make-up, handling and reclaim, ticketing and check-in; and
- immigration, customs and quarantine services (for international flights).

Commercial activities

Commercial activities cover a range of services and activities not directly related to the interchange of passengers and freight between surface and air transport. They include retail outlets, banks, restaurants and bars, car-hire desks, car parking, and at some large airports, such as Frankfurt, can extend to activities such as conference centres and hotels, cinemas, night clubs and supermarkets.

Airport capacity

The (physical) capacity of an airport refers to its ability to accommodate aircraft movements. The overall capacity of an airport is influenced by the interaction of several factors, some of which are listed below.

- Runway size and design — the runway is the largest single capital asset of an airport and tends to be viewed as the controlling element of airport capacity.
  - Length, width and thickness of concrete of runways determine the type (size) of planes that can land, for example, larger aircraft generally require longer runways.
  - Runway design factors include the number, spacing and orientation of runways, and the nature of taxiways.
- Airport layout — can affect both aircraft taxi time and the time taken to unload and process passengers and/or cargo.
- Mix of traffic — capacity is higher at airports that have a larger proportion of their traffic serviced by larger planes.
- Air traffic control — particularly minimum separation requirements that depend, among other things, on plane size.
- Environmental constraints (both natural and regulatory), and general regulatory constraints — for instance, weather conditions, visibility, noise restrictions, movement caps, and curfews.
- Land availability — at the airport and in surrounding areas, as well as regulatory constraints on land use, influence airport design and potential for capacity expansion.

2.2 Australian airports

While there are around 2000 operational airports and airfields in Australia, most of these are small privately-owned facilities catering for general aviation aircraft (GAA). Only a relatively small number — around 200 — receive regular public transport (RPT) services. Of the airports that received RPT services in 1999-00, the ten largest airports accounted for approximately 90 per cent of all scheduled passenger movements.[1]

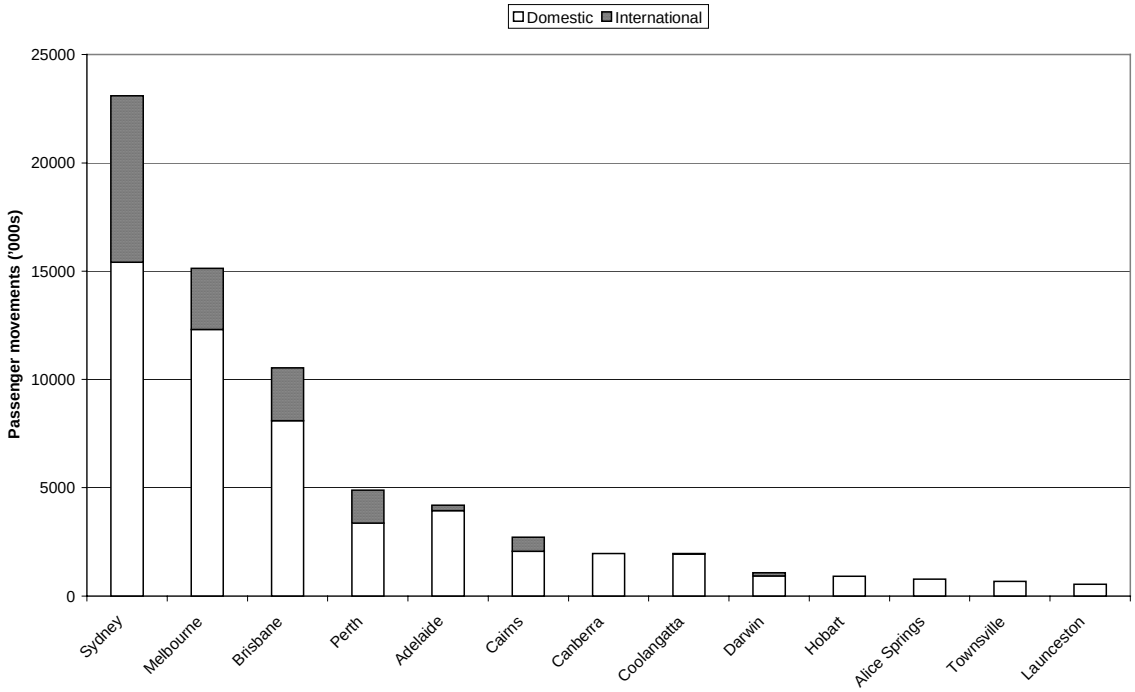
[1] Includes revenue passengers arriving at, and departing from, Australian airports on scheduled RPT services (includes international, domestic and regional services). Revenue passengers are passengers paying any fare and includes passengers travelling on tickets acquired through frequent flyer schemes.

RPT services in Australia are divided into three categories: international, domestic and regional.[2] In 1999-00, domestic travel accounted for two-thirds of approximately 75 million passenger movements, followed by international passengers with 21 per cent and regional passengers with 13 per cent.

Core-regulated airports

Except for Cairns Airport, the largest airports in Australia are all core-regulated (chapter 1). In 1999-00, these airports together accounted for 87 per cent of scheduled passenger movements. Sydney, Melbourne and Brisbane airports are by far the largest airports (figure 2.1): in 1999-00 together they accounted for 65 per cent of total passenger movements at Australian airports.

Figure 2.1 **Passenger movements at Australia's 13 largest airports, 1999-00[a]**



a Revenue passengers carried on scheduled international, domestic and regional RPT services. Domestic totals include (provisional) regional data.

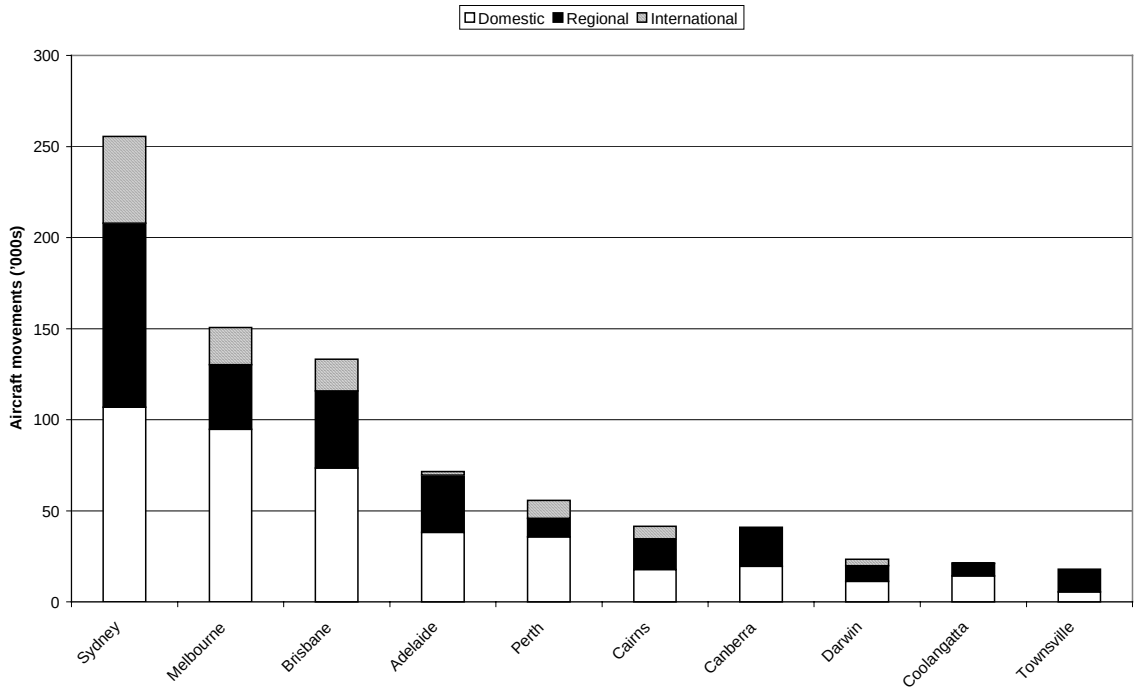
Data source: DoTRS (unpublished data).

2 'Domestic' and 'regional' are data classifications of revenue traffic carried on scheduled RPT services performed within Australia and its territories. Domestic airline data refer to revenue traffic carried by high capacity aircraft (aircraft with more than 38 seats or a payload greater than 4200 kg). Regional airline data refer to revenue traffic carried by low capacity aircraft (aircraft with 38 seats or less, or with a payload of up to 4200 kg) (DoTRS 2000b).

In 1999-00, there were approximately 15.5 million passenger movements on international RPT services at Australian airports and nearly 96 per cent of these movements were at core-regulated airports, with Sydney accounting for around half.

The 10 largest airports in Australia in terms of RPT aircraft movements in 1999-00 are shown in figure 2.2 — nine of which are core-regulated. Of the remaining core-regulated airports, Alice Springs Airport was ranked twelfth, Launceston Airport fifteenth, and Hobart Airport eighteenth.

Figure 2.2 **Aircraft movements at Australia's 10 largest airports, 1999-00[a]**

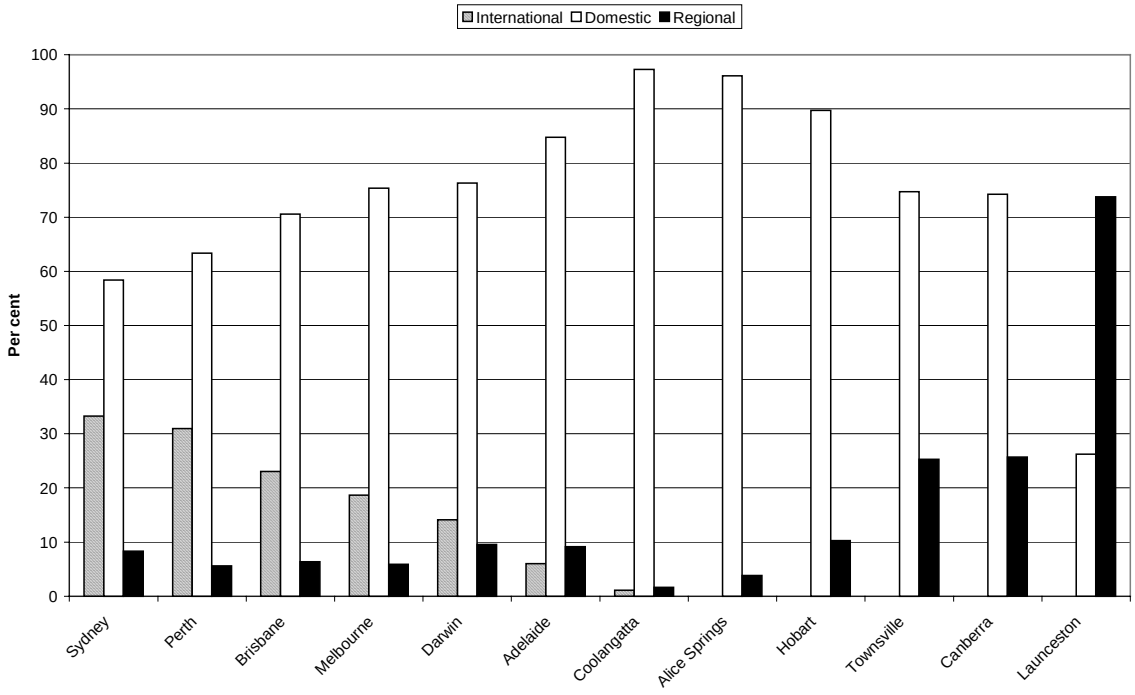


a RPT services. Includes (provisional) regional data.

Data source: DoTRS (unpublished data).

The percentage breakdown of passenger movements at core-regulated airports by airline sector is shown in figure 2.3. The share of international passengers is greatest at Sydney and Perth airports, where international passengers comprise around 30 per cent of total passenger movements.

Figure 2.3 **Passenger shares at core-regulated airports by airline sector, 1999-00[a]**



a Based on revenue passengers carried on scheduled international, domestic and regional RPT services. Includes provisional regional data.

Data source: DoTRS (unpublished data).

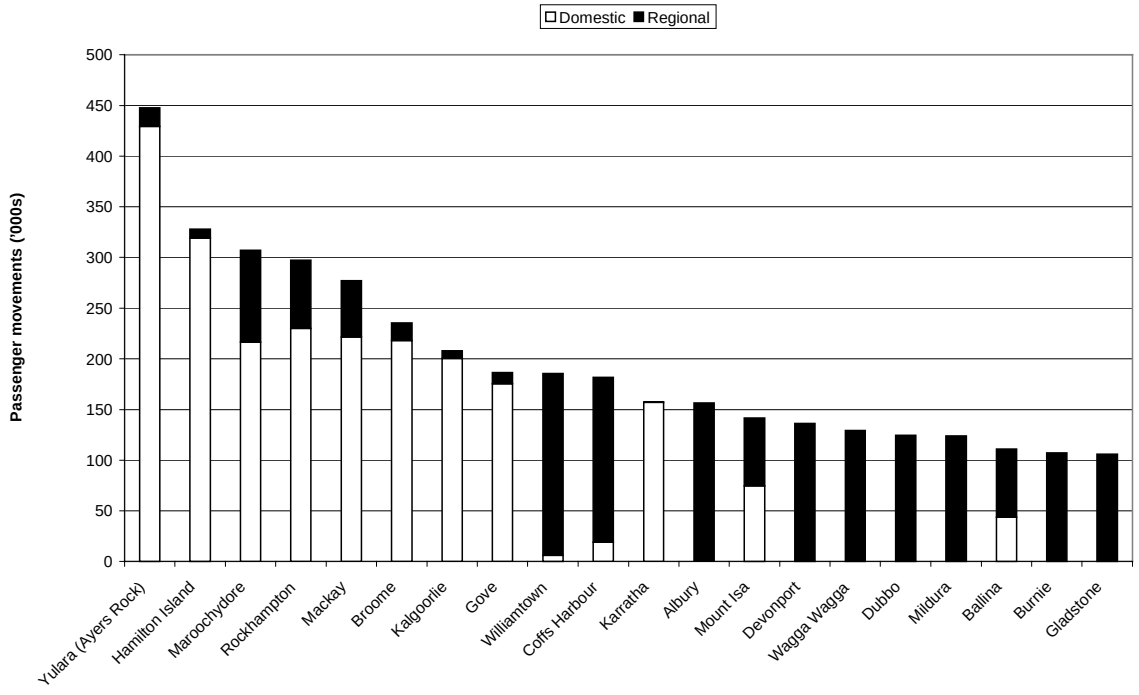
Other airports

The 20 largest non-core-regulated airports (excluding Cairns) are shown in figure 2.4. Of these airports, Mount Isa is a privatised ex-Federal Airports Corporation (FAC) airport,[3] and only Broome received (limited) international traffic. Domestic airlines account for around 60 per cent of passenger movements at these airports with the remainder made up of passengers on regional airlines.

In addition, a number of capital cities have large airports (in terms of aircraft movements) that primarily serve the general aviation sector. These include privatised ex-FAC airports such as Archerfield, Jandakot, Moorabbin and Parafield.

3 Australian Airports Limited owns and operates both Mount Isa and Townsville airports.

Figure 2.4 **Passenger movements at Australia's 20 largest non-core-regulated airports, 1999-00[a]**



a Excludes Cairns Airport. Revenue passengers carried on scheduled international, domestic and regional RPT services. Included with the domestic passenger movements at Broome Airport are approximately 700 international passenger movements. Includes provisional regional data.

Data source: DoTRS (unpublished data).

2.3 The airport business at core-regulated airports

Australia has progressed further down the path of privatisation of major airports than most other OECD nations. Most major airports around the world remain publicly-owned facilities, although there is considerable variation in public ownership structures across countries.[4] Of the OECD countries, the United Kingdom, Austria, Denmark, New Zealand, Germany and Japan are among the few moving (or which have moved) to privatisation (Button and Stough 2000). In 1997,

4 Ownership can take the form of a central government having control of all, or the majority, of a country's airports (such as Greece, Sweden and Norway); alternatively, ownership of airports can reside with regional or local governments. Another variation on the public ownership model is for the government to establish an authority with the specific brief to manage one or more airports on behalf of the government. In the late 1970s and 1980s, several national airport authorities came into being, modelled on the British Airports Authority, as it was prior to privatisation. Examples include the Airports Authority of Thailand, the Israeli Airports Authority, the Mexican Airports Authority and Aer Rianta (the Irish airports authority).

the Federal Aviation Administration in the United States introduced an airport privatisation pilot scheme with the opportunity for five airports to be privatised — by 2000, only two sales had been completed.[5]

Ownership

Nine unlisted companies manage Australia's 11 privatised core-regulated airports.[6] The *Airports Act 1996* (Airports Act) includes some limits on the amount of foreign ownership of airport companies and on the degree of common ownership of certain pairs of airports (chapter 3). Two overseas airport operators have interests in Australian airport companies: BAA plc[7] in Australia Pacific Airports Corporation (APAC), which operates Melbourne and Launceston airports; and Amsterdam Airport Schiphol in Brisbane Airport Corporation (BAC). A number of investment and funds management companies hold substantial interests in airport companies and, at some airports, there is a degree of public ownership with local and State governments maintaining an interest in the operating company.[8]

Sydney Airports Corporation Limited (SACL), a corporatised Commonwealth entity, operates Sydney Airport. SACL also operates the three other Sydney basin airports while Essendon Airport Limited (a subsidiary of SACL) operates Essendon Airport. As noted in chapter 1, the sale of Essendon Airport is scheduled for completion in September 2001, and Sydney Airport is expected to be sold in the second half of 2001.

Structures and responsibilities

While the range of services and activities provided at airports varies across the core-regulated airports, the division of responsibility for the provision of these services (operational, handling and commercial activities) follows a similar pattern. As is the case with most major airports in developed countries — and as was the case with the core-regulated airports' previous operator, the FAC — the airport operator provides relatively few services directly to airport users. Rather, Australian airport

5 A 99-year lease on Stewart International in New York State has been sold to National Express, and Niagara Falls International has been sold to a Spanish company, CINTRA (TRL 2000b).

6 Australia Pacific Airports Corporation operates Melbourne and Launceston airports, and Northern Territory Airports Group operates Darwin and Alice Springs airports.

7 BAA plc operates a number of airports in the United Kingdom including Heathrow, Gatwick, Glasgow and Edinburgh airports.

8 For example, the Port of Brisbane Corporation, a wholly state-owned enterprise, has interests in BAC, and Launceston City Council has an equity share in Australia Pacific Airports (Launceston) Pty Ltd.

operators tend to provide and maintain facilities that allow other organisations to carry out their activities. These organisations include government agencies such as Airservices Australia (ASA), airlines (and other specialist providers of operational and handling services) and concession holders.

ASA, a government-owned commercial authority, is responsible for air traffic control and airspace management services at all core-regulated airports — and 14 other major Australian airports where traffic levels are sufficiently large to require air traffic control services. ASA also delivers aeronautical information, communications and, at 16 major airports (including all core-regulated airports), rescue and firefighting services.

While ASA is responsible for air traffic control and airspace management services, it is not responsible for allocating landing and take-off slots. The Airports Act (described in chapter 3) provides for the Minister of Transport and Regional Services to authorise a body to be the slot coordinator at Australian airports. Currently, Airport Coordination Australia (ACA), a private company, is the authorised slot coordinator. ACA provides timeslot management services for all international airline services and new entrant airlines servicing domestic routes at Australian airports, and all operations at Sydney Airport.[9]

Other Commonwealth Government agencies that provide services at core-regulated airports include the Civil Aviation Safety Authority (which conducts safety regulation of civil air operations), the Australian Customs Service, the Australian Quarantine and Inspection Service, the Department of Immigration and Multicultural Affairs, and the Australian Federal Police.

Airport operators are required to provide a number of government-mandated security services. At the seven core-regulated airports with international RPT services it is a requirement that Australian Protective Services, a Commonwealth government security agency, is engaged to provide a counter-terrorist first response capability. Other required services are security screening of passengers and hand-baggage, and checked-baggage. Most airports engage specialist companies to provide these services (there is no requirement to engage any particular provider), although there is some variation across airports as to whether the airport operators themselves supply the equipment required for passenger and baggage screening, or lease it from a specialist provider.

Australian airport operators also provide and maintain runways, taxiways, visual navigation aids, airfield lighting, roads and aircraft parking areas. Usually, ground-

9 Slot management at Sydney Airport is regulated separately from other airports under the *Sydney Airport Demand Management Act 1997* (chapter 3).

handling services such as cleaning, provision of power, baggage handling and other operational services (for example, aircraft push-back and towing, and ground engineering) are supplied by the airlines and/or independent suppliers.

Airport operator involvement in other airside activities, such as refuelling and freight storage, is limited to the provision of basic infrastructure, or to the provision of land to allow others to provide the infrastructure and services. For example, at larger airports oil companies often provide both refuelling facilities and services at airports, the airport operator provides land on which oil companies can build storage and reticulation equipment. Oil companies often operate the storage and reticulation systems as a joint venture (referred to as a joint user hydrant installation (JUHI)). Airports historically have charged for the use of land to build refuelling facilities by way of rent payable under leases and licence fees (appendix E). However, at small airports where fuel is trucked to aircraft the situation may differ: the airport operator provides facilities for access to the aircraft and it may also provide for storage of fuel and equipment (ACCC 1998b).

Landside, airport operators manage international and domestic common-user terminals and the infrastructure associated with these facilities, such as check-in counters, baggage reclaim and handling systems, escalators, flight information systems and passenger lounges. Airlines tend to operate the check-in and baggage and freight facilities. Airport operators also manage the provision of retailing and advertising services at these terminals.

The management of the domestic terminals used by Australia's major domestic carriers, Ansett and Qantas Airways, is quite different from those at the common-user terminals (both domestic and international). The two major domestic airlines operate their own domestic terminals under long-term leases negotiated prior to the establishment of the FAC. Under the leases, which at most core-regulated airports run to around 2018, airlines are responsible for all operational aspects at the terminal, including managing the provision of retailing and advertising activities. In addition, at some airports, including Melbourne and Sydney, airline responsibility extends to providing and maintaining terminal infrastructure — the airport operator provides the land only for the domestic terminals under the leases. At other airports, such as Brisbane, the airport operator provides and maintains the terminal infrastructure under the leases.

The airport operators (or, in the case of domestic terminals, the airlines) engage specialist operators to provide commercial activities. Retail, car-hire and catering activities are delivered under this type of arrangement. Car-parking management appears to be the only commercial activity that some airport operators perform directly. Airport operators at Brisbane, Perth and Sydney airports, for example,

manage some or all of their car-parking services directly whereas Melbourne and Canberra have engaged the services of a car-parking management company.

International comparisons

The arrangements for the provision and management of airport facilities and services at core-regulated airports generally are similar to those in place at major airports in other developed countries. Although the ownership structures differ significantly, airport operators do not tend to provide many services directly. Instead, as is the case in Australia, they manage the facilities and infrastructure that allow airlines and other organisations to carry out their business.

Common to nearly all airports is that local or central government authorities provide air traffic control and navigation services. Even when the airport operator provides these services, government policies or international arrangements (chapter 3) heavily influence the nature of the service.

However, at some airports there are significant differences in the organisational structure of service provision. Some major European airports are directly involved in the provision of ground-handling services and, until recently, a number of airports were the sole providers of these services (such as Frankfurt and Milan airports). This situation altered as a result of a European Commission directive aimed at introducing competition in ground-handling services at all European Community airports.[10]

Some airport operators also are directly involved in the provision of commercial activities. For example, Aer Rianta, the Irish airport authority, operates the duty and tax free shops at its airports including Dublin and, in the case of Shannon Airport, operates catering and bars (Aer Rianta no date). At Fiumicino Airport in Rome, the airport authority also operates a number of retail outlets (ADR no date).

Perhaps the most significant difference between the organisational structure of core-regulated airports and those of airports overseas is in the management of domestic terminals. Airline management of their own terminal infrastructure is unusual in an international context. The only other developed country where this type of arrangement is common is the United States, where airlines own or lease most terminals in major airports (although, as is the case in Australia, major airports often have a common-user terminal that is managed by the airport operator).

10 Council Directive 96/67/EC of 15 October 1996 on access to the ground-handling market at Community airports.

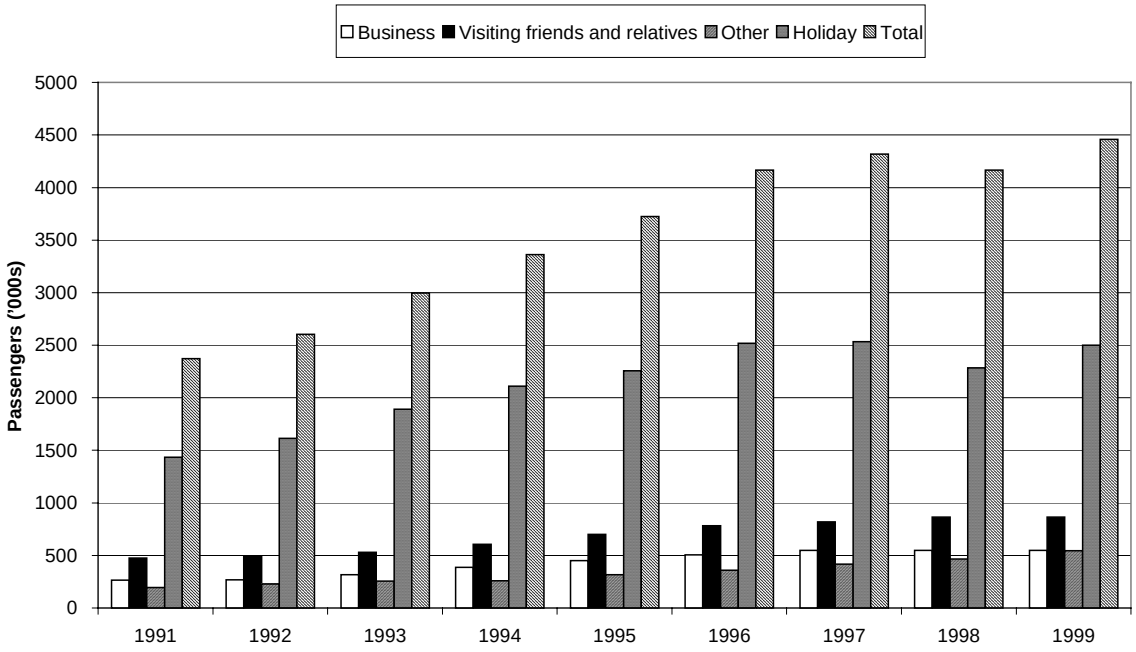
Demand for airport services

The demand for airport services is, in general, a derived demand: the demand for airport services is derived from the demand for airline services; the demand for airline services is, in turn, derived from the demand for business meetings, for visiting friends and relatives, for migration, for tourism, for freight handling and so on. The demand for airport services is also filtered through the cost structure of other input providers, including airlines. This section describes in broad terms the different air travel segments served by Australian airports, and changes in demand over time. Demand elasticities of airport services are discussed in chapter 5.

Air travel and airports

A breakdown of international (foreign) visitors arriving by air by purpose of visit is shown in figure 2.5. Most international visitors come to Australia for tourism purposes — around 56 per cent in 1999. These visitors to Australia must choose an international gateway airport, the five largest being Sydney, Brisbane, Melbourne, Perth and Cairns. Together, in 1999-00, these airports accounted for over 97 per cent of international arrivals and departures in Australia.

Figure 2.5 **International visitor arrivals by purpose of visit, 1991–1999**



Data source: ABS (*Overseas Arrivals and Departures, Australia*, Cat. no. 3401.0).

The airlines in the domestic market link the principal cities throughout Australia by operating high-capacity jet aircraft. In 2000, ten routes (city pairs) accounted for over two-thirds of all passenger movements in Australia (table 2.1). For each principal city, the domestic market is concentrated at one airport. The regional market generally links the smaller centres with the larger principal cities, with each regional city served by one airport.

Table 2.1 **Rank of major routes (city pairs) by passenger movements, 2000[a]**

Rank	*City pair*	*Passengers*
1	Melbourne – Sydney	5 877 971
2	Brisbane – Sydney	3 734 524
3	Brisbane – Melbourne	1 875 504
4	Adelaide – Melbourne	1 373 578
5	Coolangatta – Sydney	1 250 460
6	Adelaide – Sydney	1 180 389
7	Perth – Sydney	1 043 461
8	Brisbane – Cairns	994 818
9	Melbourne – Perth	978 874
10	Canberra – Sydney[b]	907 688
	Other	8 854 557
	Total	28 071 824

a Includes passengers carried on international flights operated by Australian airlines over these city pairs. **b** Includes passengers carried by subsidiary regional airlines.

Source: DoTRS (2001).

During the 1990s, passenger movements increased significantly at core-regulated airports (figure 2.6). Over the period 1991-92 to 1999-00, passenger movements increased by more than a third at all core-regulated airports, except Alice Springs and Launceston — where passenger movements over the same period increased by 9 and 18 per cent, respectively. While growth in passenger movements has generally been strong, growth in international passenger movements at some of the major gateway airports (particularly Brisbane and Cairns) slowed in the late 1990s, partly as a result of the economic downturn in Asia.

Figure 2.6 **Passenger movements at core-regulated airports, 1991-92 to 1999-00[a]**

Passenger movements ('000s)

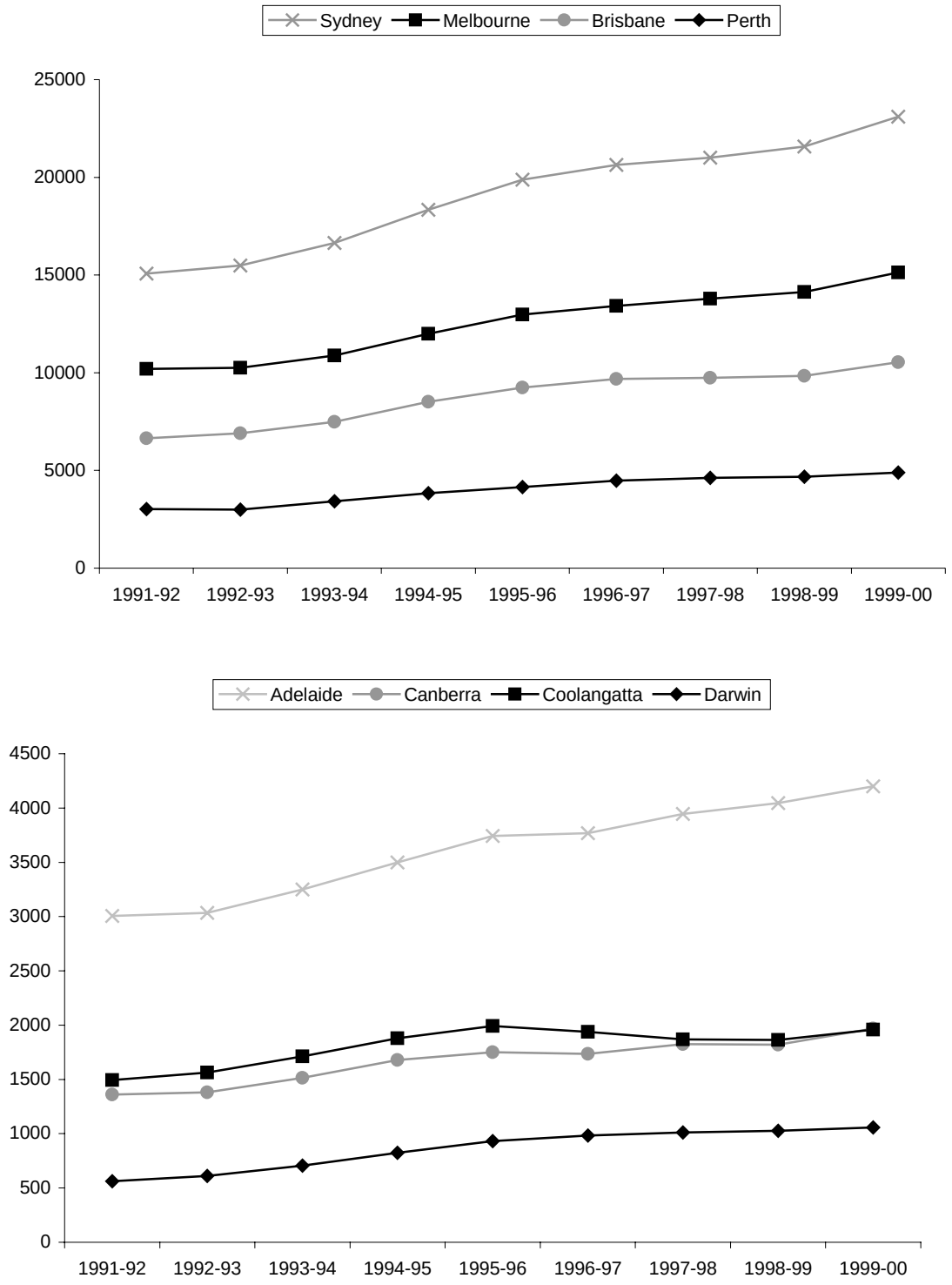


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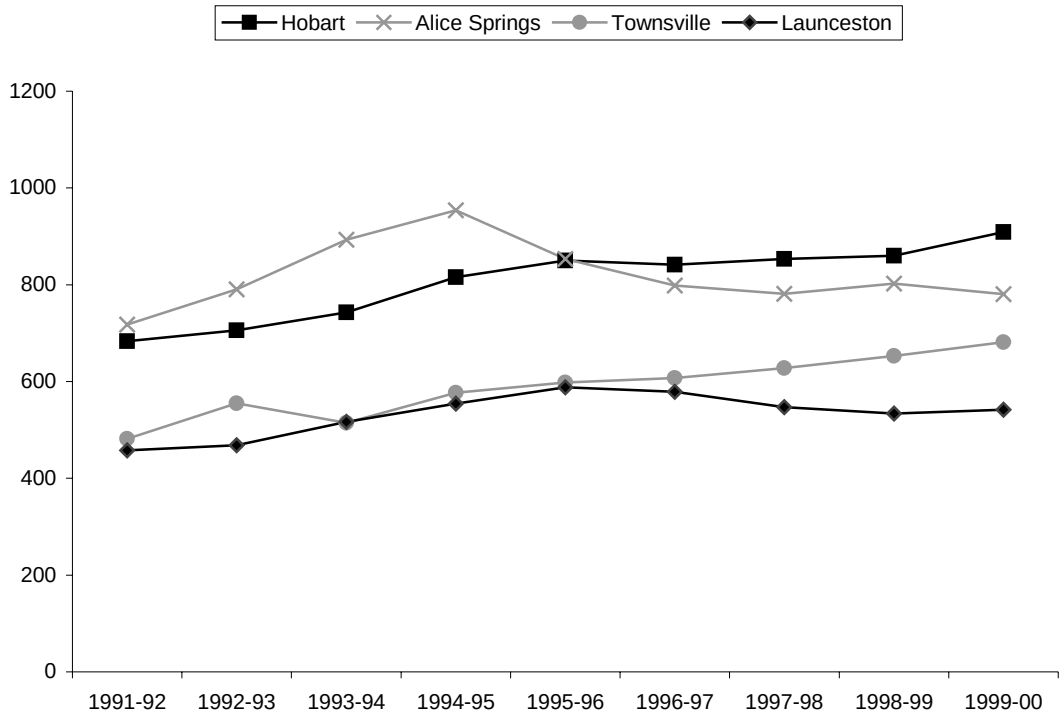
Figure 2.6 (continued)



a Based on revenue passengers carried on scheduled international, domestic and regional RPT services. Includes (provisional) regional data.

Data source: DoTRS (unpublished data).

Sources of airport revenue

In 1999-00, total revenue earned at core-regulated airports was approximately $783 million. Of this, Sydney, Melbourne and Brisbane together accounted for approximately 80 per cent.

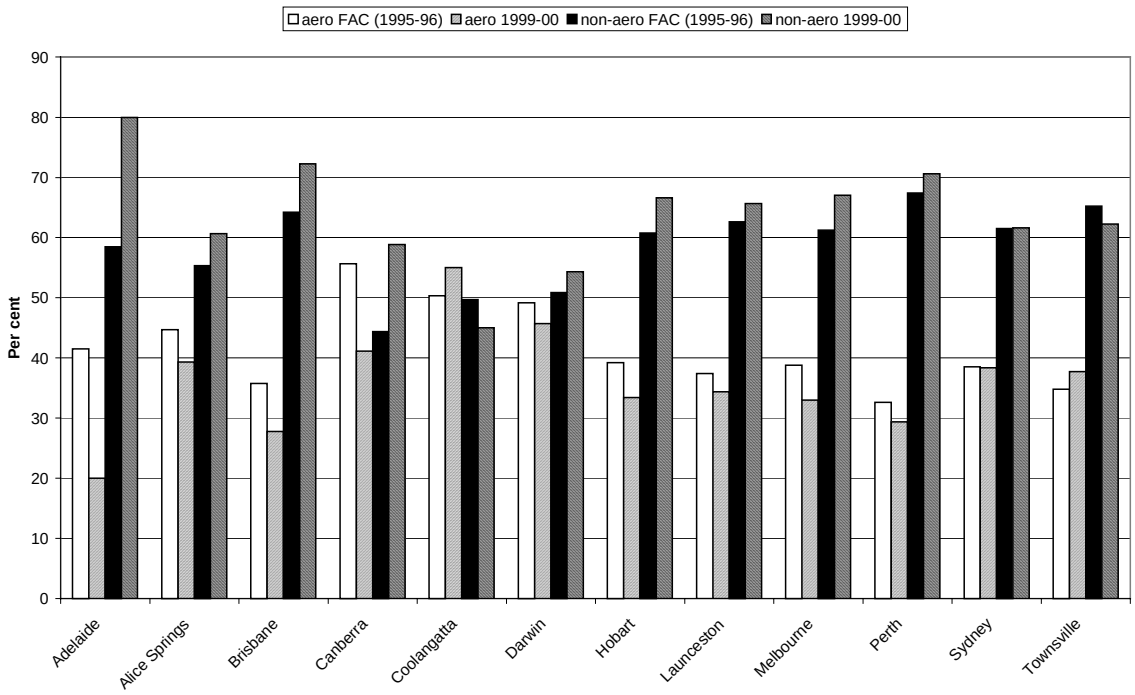
Airport revenue can be divided into aeronautical and non-aeronautical revenue. Generally, aeronautical revenue refers to the revenues earned by the airport operator from the provision of a number of key essential operating and handling services and facilities.

In Australia, for core-regulated airports under the current regulatory framework, aeronautical revenue is defined to include revenue earned by airports from services subject to prices notification under the *Prices Surveillance Act 1983* (chapter 3). Included is revenue derived from airport provision of a number of essential operating and handling services and facilities, with most aeronautical revenue being earned from runway charges and (international and domestic common-user)

terminal charges.[11] From 1998-99, revenue from vehicle access charges levied on taxis at Brisbane, Perth and Canberra airports was classified by the ACCC as aeronautical revenue (appendix E). At all three airports, in 1999-00, revenue from these vehicle access charges amounted to less than 1 per cent of total aeronautical revenue.

In 1999-00, across all core-regulated airports, only 34 per cent of total revenue was earned from aeronautical services. Coolangatta Airport reported the highest proportion of revenue from aeronautical services — 55 per cent. In 1995-96, prior to privatisation, when all current core-regulated airports were operated by the FAC, the average share of revenue from the same bundle of aeronautical services at the same airports was 38 per cent. Since 1995-96, the share of revenue earned from non-aeronautical services has increased at all privatised core-regulated airports apart from Coolangatta and Townsville (figure 2.7).

Figure 2.7 **Comparison of revenue shares between FAC and core-regulated airports[a]**



a The high share of non-aeronautical revenue at Adelaide Airport may be explained partly by the importance of property revenue to the airport. Property revenue accounts for around half of Adelaide Airport's total revenue, with major sources including the domestic terminals leased to Qantas and Ansett, and a light-industrial business precinct.

Data sources: ACCC (2001b–f); FAC (1996).

11 Also included in aeronautical revenues are revenues collected from airport charges levied on airlines to cover the costs of services provided by Australian Protective Services.

A number of airport operators — such as BAC (sub. 8) and Westralia Airports Corporation (WAC, sub. 21) — stated that the potential growth opportunities from non-aeronautical services were significant contributing factors to their decision to become involved in the airport business in Australia, and the final price paid. As WAC noted:

> The bidders for [Perth Airport] were attracted to statements in the information memorandum that highlighted … unexploited commercial potential in retail, trading, car parking, ground transport and property development. (sub. 21, p. 6)

Retail operations, in particular, have become an important source of revenue for airports, and an area airport operators have sought to develop since privatisation — Australia Pacific Airports Corporation, in its 1999-00 annual report (APAC 2000a), noted that revenue from retail operations has increased by 45 per cent since privatisation at Melbourne Airport.[12]

As noted above, airport operators generally do not provide retail services directly. They provide space for retailers to carry out their business. The payment agreements between airports and retailers are based primarily on concession fees (where airports receive payments based on the volume of revenue generated by the retailer),[13] often complemented by a small fixed annual rental component. Airports can be an attractive location for retailers because they provide access to potentially large volumes of relatively affluent customers (Melbourne Airport, sub. 7). Doganis (1992) noted that concession income is strongly related to passenger numbers generally, and the number of international travellers in particular. The two airports where the percentage of non-aeronautical revenue has fallen since privatisation — Coolangatta and Townsville — do not have significant international RPT services.

Several privatised core-regulated airports — particularly Brisbane and Adelaide — see property revenue as a means to increase non-aeronautical revenue. Brisbane Airport, for example, has established a light-industrial precinct on airport property to take advantage of its large land holdings. Current and planned operations at the precinct include a mobile phone and accessories wholesaler and Australia Post, as well as operations more traditionally associated with airports, such as freight operations (BAC 2001).

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12 Retail revenue is a component of non-aeronautical revenue. In this instance, retail revenue refers to four revenue streams: (1) duty free, food and beverage, currency exchange and speciality stores within the international terminal; (2) short- and long-term car parks; (3) car-rental concessions; and (4) advertising sites.

13 Concession fees can also be based on passenger numbers, although this form of payment is less common.

Rentals paid to airport operators by the two major airlines for the leases on the domestic terminals are classified as property revenue, in both the regulatory accounts and company annual reports. Property revenue also includes payments to airports from the providers of operating and handling services for the use of land and facilities. Consequently, property revenue is often a significant component of an airport operator's total revenue. It is approximately a third of total revenue at Hobart Airport (sub. 11) and nearly half at Adelaide Airport (Adelaide Airport Limited (AAL), sub. 20).

Several participants noted that a significant proportion of airport revenue, and aeronautical revenue in particular, is generated from a very small number of airlines. Melbourne Airport noted that approximately 80 per cent of Melbourne Airport's aeronautical revenue comes from four customers, with Qantas Airways, by itself, accounting for around 40 per cent. These same four customers account for 45 per cent of the airport's total revenue (sub. 7; trans., p. 104 in PC 2001a). At Perth Airport, Ansett and Qantas accounted for approximately 46 per cent of aeronautical revenues and 64 per cent of property revenues: 'when airline alliances are taken into account, 84 per cent of aeronautical revenues and 68 per cent of property revenues are earned from the two Alliances [Star and One World]' (sub. 21, p. 33).

At smaller airports, the reliance on the major domestic carriers can be even greater. At Launceston Airport, for example, Qantas and Ansett account for 98 per cent of aeronautical revenue (Melbourne Airport, sub. 7). AAL noted:

> Qantas and Ansett alone, and their regional airlines, currently contribute about 75 percent of aeronautical revenues at Adelaide Airport (or approximately 23 percent of total current revenue) … In total, more than half of AAL's total revenue is sourced from Qantas and Ansett. (sub. 20, p. 8)

Charges for aeronautical services

Charges for aeronautical services at Australian core-regulated airports are shown in table 2.2. Airport operators typically levy a landing charge for the use of runways, taxiways and aprons (currently airport operators do not supply air traffic control services) and, where they operate the terminal, a terminal charge. At some airports additional charges are levied for aircraft parking.

Table 2.2 **Major user charges at core-regulated airports,[a] 2000[b]**

	Runway charges	*International terminal charges*	*Aircraft parking*	*Airservices Australia*[c]
	$A/tonne MTOW	$A/tonne MTOW	$A/aircraft	$A/tonne MTOW
Adelaide	4.72	1.05	11 per day	10.39
Alice Springs	5.55	na	0	12.14
Brisbane	5.30	2.43	11 per day	5.67
Canberra	(2.27)[d]	na	0	10.83
Coolangatta	5.32	na	0	11.99
Darwin	5.55	1.02	0	8.89
Hobart	5.55	1.05	11 per day	13.79
Launceston	5.61	na	0	14.53
Melbourne	5.34	3.80	50 per day	4.06
Perth	5.06	2.48	10 per day	8.19
Sydney — July 2000 charges	2.92	7.92	11 per day[e]	4.65
Sydney —May 2001 charges[f]	6.88[g]	(8.17)[d]	35 per 15 minutes	4.65
Townsville	5.75	1.05	0	4.33[h]

[a] GST exclusive. Charges are for RPT services greater than 10 tonnes MTOW. [b] As at 30 June 2000. [c] As at 1 July 2000. ASA charges include terminal navigation charges, and aviation rescue and firefighting charges. [d] Per passenger charge. [e] For each aircraft parked in a designated general aviation parking area (an aircraft parked for more than two hours is charged the daily rate). A different charge is levied on aircraft parking in a designated aviation area. Prior to the ACCC May 2001 decision, the charge was $350 a day. The approved charge is $35 per 15 minutes. [f] ACCC approved prices. [g] Based on a runway charge of $3.44/MTOW, which is levied at landing and take-off. Other core-regulated airports currently charge for landing only. [h] Terminal navigation charges only. **na** Not applicable. **MTOW** Maximum take-off weight.

Sources: ACCC (2001b–i); ASA (2000).

The starting point for runway charges at privatised airports was the FAC charge at the time of privatisation, which was the same at all these airports apart from Adelaide. The differences in current runway charges across privatised airports reflect the different compliance requirements for these airports under their respective price-cap arrangements (chapter 3). The starting point for terminal charges were also the FAC charge — shortly before privatisation (in January 1997) the FAC increased charges for the use of terminals at Sydney, Melbourne, Brisbane, Adelaide and Perth airports by varying amounts for each airport.

Prior to the May 2001 ACCC decision on the SACL pricing proposal (ACCC 2001i), runway charges at Sydney Airport were the lowest among the core-regulated airports. As a result of the decision they are now the highest.[14]

14 Sydney Airport now levies charges at both landing and take-off. Other core-regulated airports levy charges at landings only.

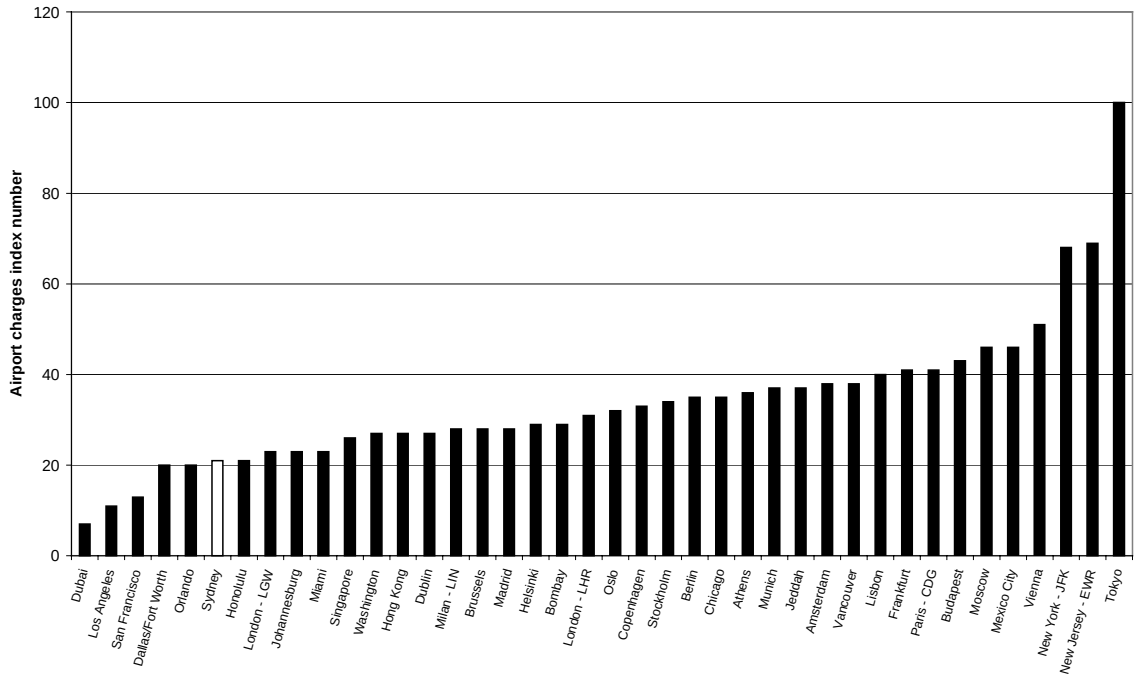
Most user charges at core-regulated airports are levied on the same basis as the system used by the FAC. User-charges still tend to be calculated on the basis of the maximum take-off weight (MTOW) of the aircraft. However, recently there has been a trend to introduce per passenger charges, particularly for the international and common-user domestic terminals. Sydney Airport now levies charges for use of the international terminal on a per passenger basis. Melbourne Airport charges for use of its Multi-User Domestic Terminal on a per passenger basis. Adelaide Airport is proposing a passenger facilitation charge to recover the costs for its Multi-User Integrated Terminal — with separate charges for international, domestic and regional passengers (ACCC 1999b). Canberra is currently the only core-regulated airport to levy runway charges on a per passenger basis.

Also shown in table 2.2, are the ASA charges for navigation and rescue services. ASA moved from network charges to location-specific charges (based on full cost recovery) for firefighting and rescue services in 1997 and for terminal navigation charges in 1998. The variation in ASA charges is much greater than airport charges and, as costs are largely fixed, charges are higher in airports with lower traffic volumes.

International comparisons

User charges at Australian airports are among the lowest in the world. The Transport Research Laboratory (TRL) compiles an annual index of user charges at 40 major international airports. The index ranks airports on the basis of the composite basket of airport services required to land and turn around an international passenger service, including air traffic control charges, terminal charges, aircraft parking charges and noise levies (figure 2.8). In 2000, charges at Sydney Airport (one of Australia's more expensive airports in terms of international terminal fees, and the only Australian airport included in the study) was ranked as the sixth cheapest in the study (TRL 2000b). The ACCC (2001i) noted in its final decision on the proposed price increases at Sydney Airport that, taking into consideration the approved price increases, user charges would still be below the average charges of those airports surveyed by TRL.

Figure 2.8 **Airport charges at selected international airports, 2000[a]**
Airport charges index[b]



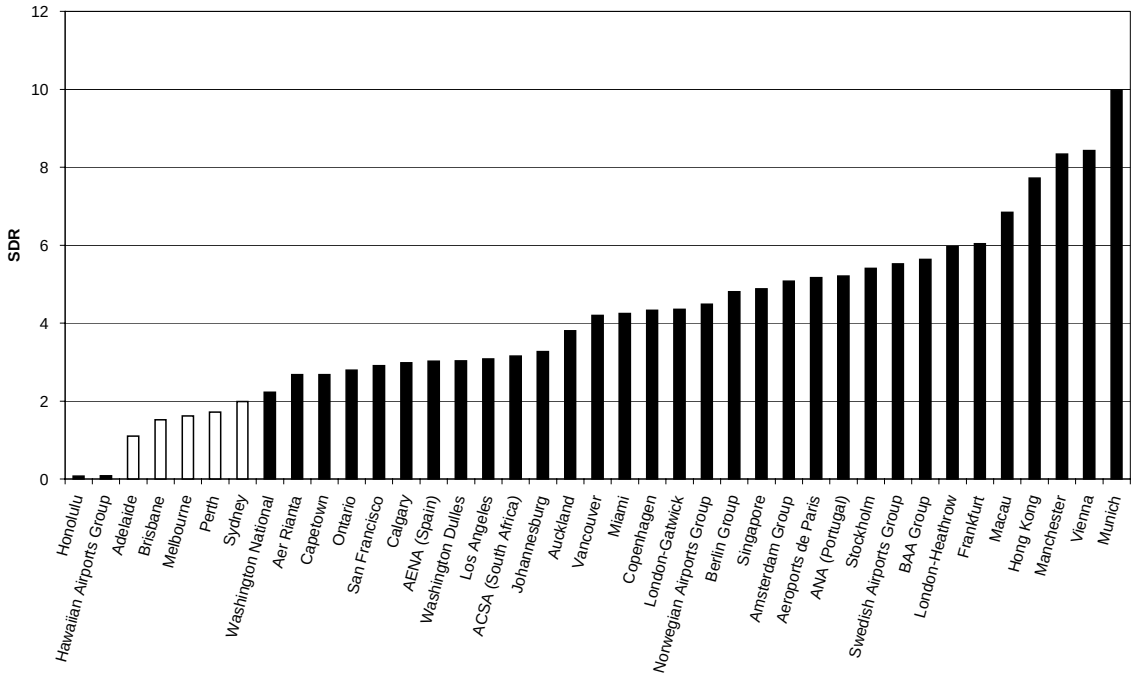
a Based on the charges for a composite basket of airport services required to land and turn around an international passenger service. **b** To derive the index, airport charges in local currencies are converted to Standard Drawing Rights (SDRs). The SDR is an artificial currency unit calculated using a weighted basket of five national currencies — the US dollar, the German deutschemark, the UK pound, the French franc and the Japanese yen. It reflects actual exchange rates, not purchasing power parity.

Data source: TRL 2000b, *Review of Airport Charges 2000*, Crowthorne, UK.

Another TRL study, reported by the ACCC (2001i), compared 40 major airports and airport groups on the basis of aeronautical revenue per aircraft movement and per passenger. The five Australian airports covered in the survey were among the lowest in the world in terms of revenue per passenger (in the bottom ten — figure 2.9) and revenue per aircraft movement (in the bottom 15). The ACCC (2001i) noted that, allowing for the approved increase in charges at Sydney Airport, charges at that airport would remain below the international average for both measures. However, because the bundle of aeronautical services provided by airport operators can differ substantially between airports, the conclusions that can be drawn from these rankings are limited. For example, unlike many overseas airports, the major domestic airlines operate their own domestic terminals under long-term leases at the Australian airports included in the study. In addition, a small number of airports included in the study (such as Frankfurt and Munich) earn aeronautical revenue through the provision of ground-handling services — which tend to be provided by airlines or specialist providers at other airports.

Figure 2.9 **Aeronautical revenue per passenger at selected international airports, 2000[a]**

Standard Drawing Rights (SDRs)[b]



a Based on total passenger movements (international, domestic and where applicable regional). **b** The SDR is an artificial currency unit calculated using a weighted basket of five national currencies — the US dollar, the German deutschemark, the UK pound, the French franc and the Japanese yen. It reflects actual exchange rates, not purchasing power parity.

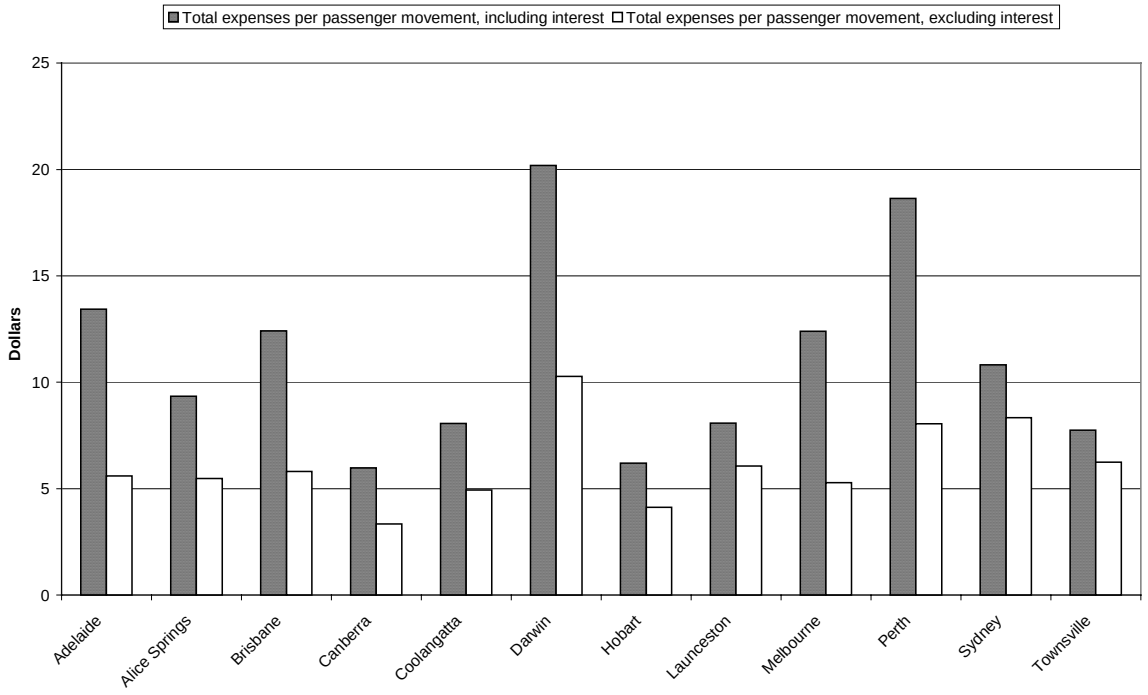
Data source: TRL 2000a, *Airport Performance Indicators 2000*, Crowthorne, UK.

Airport expenditure

Australia's core-regulated airports incurred a total of approximately $810 million in expenses in 1999-00 (including interest and depreciation). The level of expenses varied across Australian airports, with Sydney, Melbourne and Brisbane accounting for over 70 per cent of the total.

In terms of expenses per passenger movement there are significant variations across airports (figure 2.10). Differences in average expenses are influenced by a number of factors, including airport size (reflecting possible economies of scale), the composition of airport traffic (for example, airports servicing international traffic tend to incur higher costs than purely domestic airports), and genuine efficiency differences. The extent to which differences may indicate economies of scale is discussed in chapter 5.

Figure 2.10 **Expenses per passenger movement at core-regulated airports, 1999-00**

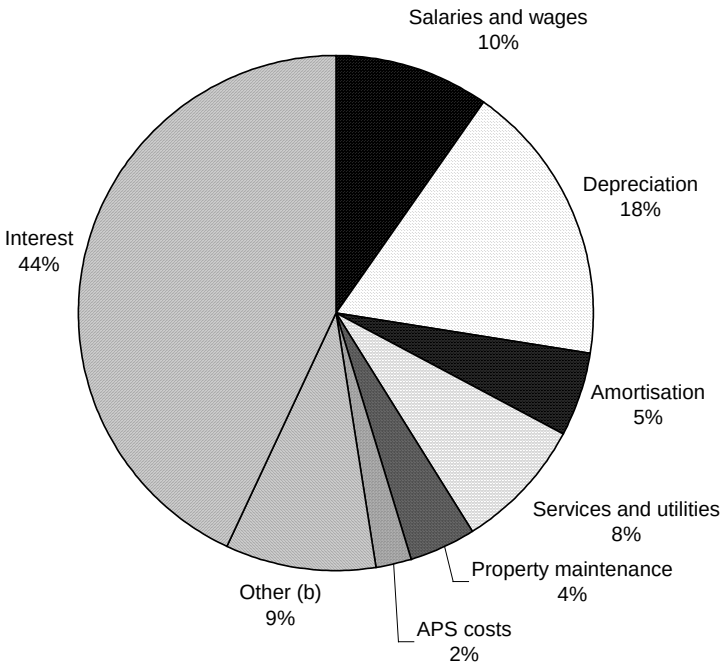


Data sources: ACCC (2001b, c, d); DoTRS (unpublished data).

Cost structures by expense category

On average, capital costs (defined as depreciation plus interest expense) is the main expense category for Australian core-regulated airports (figure 2.11) but as financing structures (equity and loans) vary significantly between airports and, in some instances, the distinction appears to be rather arbitrary, the figure for the interest category is of limited value. Salaries and wages also tend to be significant on average, though they are a much smaller component of total costs than interest and depreciation. This in part reflects the fact that labour-intensive components of airport services do not tend to be provided directly by core-regulated airports. Land also is an important component of their operations but the classification of expenses in the regulatory accounts does not provide consistent and separate measures of land expenses incurred. The value that should be placed on land is contentious (appendix F).

Figure 2.11 **Expenses of core-regulated airports, by category, 1999-00[a]**



a Expense categories used are those contained in the ACCC regulatory reports.**b** 'Other' includes the 'other' category contained in the ACCC regulatory reports plus consultants and advisers, general administration and leasing for Adelaide Airport; passenger screening for Alice Springs and Darwin airports; and passenger and checked-baggage screening for Perth Airport. **APS** Australian Protective Services.

Data sources: ACCC (2001b, c, d).

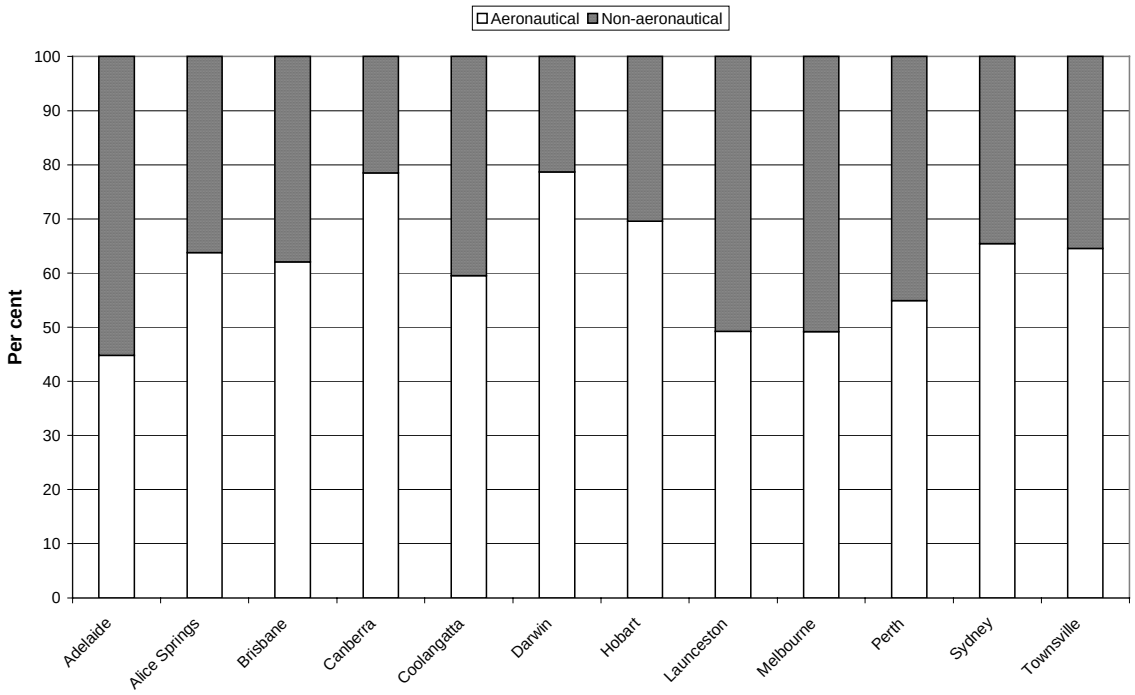
In broad terms, the cost pattern illustrated in figure 2.11 is indicative of the situation at individual airports. However, there is (sometimes significant) variation across airports. For instance:

- labour costs tend to be a more significant proportion of costs at smaller airports than they are at the larger ones; and
- not all expense categories are relevant to all airports. For example in 1999-00, only seven of the 12 core-regulated airports incurred Australian Protective Services expenses and only eight included amortisation.

Cost structures by aeronautical and non-aeronautical sources

Aeronautical expenditure tends to comprise the bulk of Australian airport expenses (figure 2.12), accounting for 60 per cent of total expenses on average in 1999-00.[15] Non-aeronautical expenditure exceeded aeronautical expenditure at three airports only in 1999-00 — Adelaide, Launceston and Melbourne.

Figure 2.12 **Aeronautical and non-aeronautical expenses of core-regulated airports, 1999-2000[a]**



a Classification of expenses as aeronautical and non-aeronautical is based on ACCC regulatory reports. Total costs do not include costs that have not been classified as either aeronautical or non-aeronautical.

Data sources: ACCC (2001b, c, d).

Generally, the higher proportion of aeronautical expenses possibly reflects the fact that airports are more likely to be directly involved in operations on the aeronautical side than the non-aeronautical side of the business, where they typically act as landlords. The relatively low proportion of aeronautical expenditure for Adelaide Airport is affected by its use of contractors to provide many of its day-to-day operations. This is because contracting expenses at Adelaide Airport are recorded as

15 Total expenses in this case exclude interest and other expenses that have not been classified as either aeronautical or non-aeronautical in the ACCC regulatory reports.

non-aeronautical expenses in the regulatory accounts even though some contracted labour is used to provide aeronautical services.[16]

The data presented here rely on information provided in the ACCC regulatory reports by the airports. Thus, measured differences across airports also are likely to be influenced by different accounting and cost allocation methods. According to WAC:

> Regulated airports lodge annual accounts with the ACCC, and while the form of the final published accounts is consistent between airports, there is no way of determining whether each airport has applied the same methodology in reporting aeronautical and non-aeronautical costs. WAC understands that each airport employs different cost accounting tools to achieve the split. (sub. 21, p. 25)

Investment expenditure

Airports invest to increase capacity and/or to maintain or improve the quality of service (see box 2.1 for examples of airport investment). Overall investment levels for airports vary depending on the size and nature of the airport, the extent of previous investment in the airport and, for the privatised airports in Australia, the amount of investment required under their lease agreements (chapter 3).

Box 2.1 Examples of investment by Australian airports since privatisation

- Melbourne Airport — approximately $100 million invested in capital projects in the first three years following privatisation (around 75 per cent of which related to terminal facilities), in addition to $130 million invested by its business partners. Melbourne Airport expects to spend around $100 million on a range of projects in 2000-01 and 2001-02, including an expansion of aircraft parking areas, domestic and international terminal infrastructure projects, retail and car-parking projects, and cargo facilities. (sub. 7, appendix 1)
- Mount Isa Airport — approximately $1.45 million invested in the two years after 11 June 1998, with investments relating to the erection of fencing to protect the airfield from animal hazards, treatment of airport pavements and a terminal upgrade (sub. 14).
- Perth Airport — $6.1 million capital investment in aeronautical infrastructure by WAC in 3½ years of private ownership (sub. 21).
- Canberra Airport — over $35 million capital expenditure since privatisation, with a further $100 million planned in the next five years (sub. 32).

16 Adelaide Airport contracted out its day-to-day operations to Serco Australia, which provides the staff required for these operations (AAL 2000).

Information provided by participants shows that total investment by individual Australian airports since privatisation has ranged from several hundred thousand dollars per year to over $30 million a year,[17] with further investment planned. Terminal upgrades, apron and runway enhancements, erection of fencing and retail development are among the types of investment already undertaken or planned for the next few years.

Profitability

Since privatisation, returns to airports have been low, and have tended to be below the stated expectations of airport operators. In 1999-00, all privatised core-regulated airports earned profits and positive returns on non-current tangible assets. However, with the exception of Townsville, all these airports reported a loss after interest and tax (table 2.3). All Phase 1 airports are highly geared (ACCC, sub. 36, attachment A) and, in general, high interest payments at all privatised core-regulated airports have been an important factor contributing to the low returns. Sydney Airport is less highly geared than other core-regulated airports (although it has substantial borrowings) and was able to generate sufficient operating profit to cover interest payments and generate net profits — approximately $43 million in 1999-00.

Table 2.3 **Selected financial results for core-regulated airports, 1999-00**

	Operating profits[a]	*Operating return*[b]	*Profit/(loss) after interest and tax*
	$m	%	$m
Adelaide	29.541	14.0	(7.131)
Alice Springs	0.417	1.7	(2.692)
Brisbane	68.274	8.0	(112.650)
Canberra	4.030	4.8	(2.196)
Coolangatta	3.243	10.6	(2.009)
Darwin	1.054	1.6	(10.130)
Hobart	2.082	17.1	(0.216)
Launceston	1.264	6.0	(0.188)
Melbourne	94.154	13.0	(20.290)
Perth	37.652	18.2	(22.398)
Sydney	120.159	3.9[c]	42.842
Townsville	1.543	10.9	0.117

[a] Before abnormal items, interest, tax and amortisation. [b] On tangible non-current assets. [c] Based on earnings before interest and tax (EBIT) on tangible non-current assets.

Sources: ACCC (sub. 36, attachment A).

[17] This does not include Sydney Airport, where SACL invested over $800 million over two years leading up to the 2000 Olympics (SACL, sub. 27).

The ACCC regulatory accounts (ACCC 2001b–f) indicate that the non-aeronautical segment of airport business is much more profitable than the aeronautical business. In 1999-00, non-aeronautical businesses generated high operating profit margins at nearly all core-regulated airports, while aeronautical businesses mostly made small profits or had losses — around half of the core-regulated airports made a loss on the aeronautical side of their businesses in 1999-00 (tables 2.4 and 2.5).

Table 2.4 **Financial indicators for aeronautical and non-aeronautical business segments at Phase 1 and Sydney airports, 1999-00**

Airport	*Revenues*	*Costs*	*Operating profit*[a]	*Operating return*[b]
	$m	$m	$m	%
Brisbane				
Aeronautical	38.211	38.016	0.195	0.0
Non-aeronautical	91.320	23.241	68.079	21.0
Melbourne				
Aeronautical	55.160	39.277	15.883	3.7
Non-aeronautical	111.823	33.700	78.123	26.5[c]
Perth				
Aeronautical	20.471	17.595	2.876	3.1
Non-aeronautical	49.207	14.431	34.776	32.5
Sydney				
Aeronautical	120.052	126.003	(5.951)	(0.4)
Non-aeronautical	190.001	66.540	123.461[d]	8.2

[a] Before abnormal items, interest, tax and amortisation. [b] On tangible non-current assets. [c] PC estimate. [d] Approximately $3 million of Sydney Airport's revenue has not been allocated between aeronautical and non-aeronautical sources.

Source: ACCC (sub. 36, attachment A).

As noted previously, the disaggregation of costs and assets into aeronautical and non-aeronautical components is determined by airport operators' interpretation of the regulatory guidelines. Consequently, there may be some variation in how costs and assets are allocated across core-regulated airports. Even allowing for variation in the disaggregation of costs and assets, it seems likely that returns from non-aeronautical businesses are greater than aeronautical businesses at core-regulated airports. As KPMG observed:

> On the assumption that revenue allocations are fairly stated and not at risk of significant subjectivity, the cost and/or asset allocations disclosed in the regulatory accounts would need to be materially misstated to change the view that aeronautical returns are less than non-aeronautical returns. (ACCC, sub. 36, attachment A, p. 6)

Table 2.5 **Financial indicators for aeronautical and non-aeronautical business segments at Phase 2 airports, 1999-00**

Airport	*Revenues*	*Costs*	*Operating profit*[a]
	$m	$m	$m
Adelaide			
Aeronautical	9.867	8.681	1.186
Non-aeronautical	39.442	11.087	28.355
Alice Springs			
Aeronautical	1.812	2.724	(0.912)
Non-aeronautical	2.795	1.466	1.329
Canberra			
Aeronautical	4.372	5.178	(0.806)
Non-aeronautical	6.255	1.419	4.836
Coolangatta			
Aeronautical	5.804	5.447	0.357
Non-aeronautical	3.593	3.703	na
Darwin			
Aeronautical	5.334	8.357	(3.023)
Non-aeronautical	6.341	2.264	4.077
Hobart			
Aeronautical	3.311	2.375	0.936
Non-aeronautical	2.184	1.038	1.146
Launceston			
Aeronautical	1.525	1.617	(0.092)
Non-aeronautical	2.914	1.558	1.356
Townsville			
Aeronautical	2.188	2.747	(0.559)
Non-aeronautical	3.611	1.509	2.102

a Before abnormal items, interest, tax and amortisation. **na** Not available, due to non-allocated revenues.

Sources: ACCC (2001b–f; sub. 36, attachment A).

2.4 The airport business at other Australian airports

Cairns Airport is Australia's largest non-core-regulated airport (and, overall, is Australia's sixth largest in terms of total passenger movements, and fifth largest for international passengers). In 1999-00, Cairns Airport's operating revenue was approximately $41.5 million. Cairns Airport is owned and operated by the Cairns Port Authority, which assumed control of the airport in 1981 under the Aerodrome Local Ownership Plan (ALOP).[18]

[18] A Commonwealth Government program where ownership and responsibility for around 230 Commonwealth airports were transferred to local councils.

The organisational structure for the provision of services is different at Cairns Airport from that of core-regulated airports. Unlike the situation at core-regulated airports, the major domestic airlines do not hold exclusive leases for their own domestic terminals, and are required to pay a user charge based on passenger numbers at the domestic terminal. The difference in charging structures — as revenue from domestic terminals at Cairns Airport is included in aeronautical revenue, while core-regulated airport revenue from the domestic airlines' terminals is classified as property income — is reflected in the relatively high proportion of 'aeronautical revenue' at Cairns Airport which, in 1999-00, was around 55 per cent of total airport revenue (CPA 2000).[19]

Of the remaining non-core-regulated airports that receive RPT, some are privately owned (for example, Hamilton Island and Mount Isa). However, most are owned and operated by local councils which, in most cases, assumed the running of the airports under the ALOP.

While there is little publicly-available information on the user charges levied on RPT at regional airports, anecdotal information suggests that there is significant variation in user charges across these airports. This may reflect the fact that most of these airports are not managed as separate business entities, but as a component of the councils' overall activities (chapter 5).

19 Refers to revenues directly related to the aircraft operations, and comprises charges on aircraft (33 per cent) and charges on goods and passengers (22 per cent).

3 The regulatory environment

In 1997 and 1998 the Commonwealth Government negotiated long-term leases for 22 Commonwealth-owned airports, with 17 being privatised (chapter 1). The objectives were to:

> … improve the efficiency of airport investment and operations in the interests of users and the general community, and to facilitate innovative management. (Harris, Department of Transport and Regional Development, 1997, p. 2)

These airports are subject to a comprehensive Commonwealth regulatory framework, major economic components of which are the *Airports Act 1996* and *Trade Practices Act 1974*, and price regulation under the *Prices Surveillance Act 1983*. They are also subject to State and Territory regulations and international agreements, which directly or indirectly affect the operation of airports, and ultimately the prices they charge for airport services.

This chapter describes the current regulatory environment affecting the operation of these, and other, airports in Australia. Where relevant, the terms and conditions of lease and sale agreements are also described. Although the inquiry's terms of reference embrace all airports, because of their importance and the emphasis in the terms of reference, this chapter focuses on the regulation of airports leased from the Commonwealth and, in particular, price regulation and access arrangements.

Chapters 8 and 9 assess the current price regulation against the criteria for efficient regulation and weigh the costs and benefits of the regulation. Chapter 9 also examines the effect of other regulations, such as section 192 of the Airports Act.

3.1 Price regulation

Pricing oversight arrangements were designed to complement the objectives (see above) of leasing the Commonwealth-owned airports.

According to a Commonwealth Department of Transport and Regional Development (DoTRD)[1] Pricing Policy Paper provided to potential airport lessees

1 Now the Department of Transport and Regional Services (DoTRS).

as part of their obligations were they to be successful bidders, pricing oversight arrangements were intended to:

> … promote operation of the airports in as an efficient and commercial a manner as possible. Pricing is fundamental to the efficient use of airport infrastructure. It is in the interests of airport users in particular, and the national economy in general, that commercially-driven decisions be made about maintaining existing airport infrastructure, and building new infrastructure. (DoTRD 1996, p. 1)

Another objective was the protection of airport users. The paper went on to note that 'the arrangements should also aim to protect airport users from any potential abuse of market power by airport operators' (DoTRD 1996, p. 1).

Finally, the Government intended to encourage more direct commercial relationships between airport operators and their customers. The paper stated:

> It is the Government's intention to step back from setting prices at individual, privately-leased airports; and to provide a framework in which — over time — airport operators and their customers are encouraged to negotiate directly, and resolve prices rather than involve the Government of the day. (DoTRD 1996, p. 1).

In early 2001, these objectives were re-stated by the Minister for Transport and Regional Services in correspondence to the Australian Competition and Consumer Commission (ACCC). The Minister also noted that implicit in the pricing oversight arrangements:

> … was that regulatory intervention would only occur where it was apparent that airport behaviour was adversely impacting on consumers or competition between airlines through the exercise of a real or perceived monopoly power. (Anderson, J., Minister for Transport and Regional Services, sub. to ACCC in response to Sydney Airport 2000 pricing proposal, p. 1)

The Commonwealth Government at the time of leasing the airports recognised that a period of adjustment to pricing oversight might be necessary in the new regulatory environment. The first five years were therefore viewed as a transition period — a review of pricing oversight arrangements was to be completed prior to the end of this period (chapter 1).

Twelve of the 22 airports are known as 'core-regulated' airports and are currently subject to price regulation under the *Prices Surveillance Act 1983* (PS Act). As noted in chapter 1, core-regulated airports comprise 11 privatised airports and Sydney Kingsford Smith Airport (Sydney Airport), which is in the process of sale. Privatised core-regulated airports are those airports with significant 'regular public transport' (RPT) and include the three Phase 1 airports (Brisbane, Melbourne and

Perth) and eight of the Phase 2 airports (Adelaide, Alice Springs, Canberra, Coolangatta, Darwin, Hobart, Launceston and Townsville).[2]

In essence, price regulation under the PS Act comprises:

- prices notification for aeronautical services;
- a CPI-X price cap on aeronautical services at privatised core-regulated airports;
- price monitoring of aeronautical-related services; and
- provisions for necessary new investment at airports.

The PS Act, and hence price regulation of airports, is administered by the ACCC. In carrying out its functions under the PS Act, the ACCC is to have regard, among other things, to:

> (a) the need to maintain investment and employment, including the influence of profitability on investment and employment; [and]
>
> (b) the need to discourage a person who is in a position substantially to influence a market for goods or services from taking advantage of that power in setting prices. (PS Act, s. 17(3))

Regulation of airport services

A range of services provided by core-regulated airports, including Sydney, is subject to prices notification or monitoring under the PS Act (box 3.1). The basket of aeronautical services — as defined in the now rescinded *Federal Airports Corporation Act 1986* — to which prices notification applies, remains unchanged from the period when the Federal Airports Corporation (FAC) operated airports.

Services and facilities provided by domestic terminals that are leased long-term to airlines are not subject to price regulation. However, domestic common-user terminals and international terminals are covered by price regulation.

Aeronautical services are subject to prices notification under the PS Act. This requires specified companies to notify the ACCC of all proposed price increases for these services. Financial penalties apply for failure to notify price increases. The ACCC is required to make a determination about the notified price increase within 21 days unless the company agrees to an extension. Although the determination is not enforceable, failure to comply could, under the PS Act, trigger a public inquiry

2 The regulatory environment for airports leased from the Commonwealth and not subject to price regulation is described in section 3.4. These airports are: Mount Isa, Tennant Creek, Archerfield, Jandakot, Moorabbin, Parafield, three Sydney basin airports (Bankstown, Camden and Hoxton Park) and Essendon Airport.

and the freezing of charges. Moreover, the Government reserves the right to consider advice from the ACCC regarding the need for stronger regulation (DoTRD 1996).

Box 3.1 **Regulation of facilities and activities**

Aeronautical services (those notified for the purposes of subsection 21(1) of the PS Act)[3] at all core-regulated airports, including Sydney Airport, are grouped in two main categories: aircraft movement facilities and activities, and passenger processing facilities and activities.

Aircraft movement facilities and activities comprise: airside grounds, runways, taxiways and aprons; airfield lighting, airside roads and airside lighting; airside safety; nose-in guidance; aircraft parking areas; and visual navigation aids.

Passenger processing facilities and activities include: forward airline support area services; aerobridges and airside buses; departure lounges; immigration and customs services areas; public address systems, closed circuit surveillance systems; baggage make-up, handling and reclaim; public areas in terminals; flight information display systems; landside road and lighting; and covered walkways.

Some aeronautical-related services provided by airport operators are not subject to notification but are subject to price monitoring under section 27A of the PS Act.[4] These are: aircraft refuelling; aircraft maintenance sites and buildings; freight equipment storage sites; freight facility sites and buildings; ground support equipment sites; check-in counters and related facilities; and public and staff car parks.

Not all services provided by airport operators are subject to prices oversight. For example, there is no prices oversight of airport operators' revenues from rents or leases for retail shops and cafes, administration and office space, catering facilities, valet parking services and VIP lounges.

Moreover, airport operators do not have responsibility for all aeronautical services provided at airports. Aeronautical services outside airport operators' areas of responsibility include: en-route navigation and terminal navigation (air traffic control and airspace management); aeronautical information; communications; and firefighting and rescue services.

Sources: Prices Surveillance Act 1983; ACCC (2000a).

3 Declaration No. 87, June 2000, covering Brisbane, Melbourne and Perth airports, Declaration No. 88, June 2000 (Adelaide, Alice Springs, Canberra, Coolangatta, Darwin, Hobart, Launceston and Townsville airports), and Declaration No. 89, June 2000 (Sydney Airport). These Declarations replaced previous Declarations.

4 Declarations Nos 87, 88 and 89. The Minister for Financial Services and Regulation (pursuant to s. 27A of the PS Act) directed the ACCC to undertake formal monitoring of prices, costs and profits related to the supply of specified aeronautical-related services at all core-regulated airports (Direction No. 21, October 2000, replacing previous Directions).

Price monitoring is a less intrusive form of regulation than prices notification. Monitoring of aeronautical-related services requires the ACCC to monitor and report publicly on prices of these services and their relationship to costs. No determination is made by the ACCC but it can recommend whether more or less rigorous prices oversight may be needed.

Price-cap arrangements

Aeronautical services are subject to an annual CPI-X price cap at all core-regulated airports, except Sydney Airport, for a five-year period following privatisation (pursuant to section 20 of the PS Act). Direction No. 20, by the Minister for Financial Services and Regulation, describes the price-cap arrangements.[5]

Aeronautical-related services and non-aeronautical services are excluded from the price cap (box 3.1). Only revenues from those services within the cap are taken into account in assessing airport operator compliance with the cap — a so-called 'dual-till' approach to price regulation.

The price-cap arrangements are administered by the ACCC. It assesses any individual notified price increases (as mentioned above), focussing on whether they are likely to comply with the price cap, and also undertakes a formal annual assessment of each airport operator's compliance with the price cap. Although compliance with the overall price cap is not directly enforceable, non-compliance may result in a response from the ACCC similar to that for individual notified price increases.

Airport operators must provide the ACCC with sufficient information to enable these assessments to be made. For individual price notifications, this includes information on initial and new prices and previous years' revenue shares of the relevant component. Information to enable an assessment of price-cap compliance includes revenue from each of the charging components for the year of assessment and previous year, and volume and output for each component (ACCC 1997a).

CPI-X

The CPI measure for the price cap is the Treasury Underlying Rate of Consumer Price Inflation. Each airport's X value was set by the Commonwealth Government, on advice from the ACCC, and 'reflects expected productivity improvements that the Government considers can be made in the provision of aeronautical services at each airport' (Costello (Treasurer), Direction No. 12, June 1997, p. 1). The X values

5 Direction No. 20, October 2000, replaced Direction No. 17, and previously, No. 13.

vary substantially between airports, ranging from 1 per cent for Canberra and Townsville airports to 5.5 per cent for Perth Airport (table 3.1). The starting prices for the price cap were the FAC prices at the time of privatisation — shortly before privatisation (in January 1997) the FAC increased charges for the use of terminals at Sydney, Melbourne, Brisbane, Adelaide and Perth airports by varying amounts for each airport.

Table 3.1 **X values to apply in each year of the price cap at core-regulated airports**

Airport	*X values (%)*
Adelaide	4.0
Alice Springs	3.0
Brisbane	4.5
Canberra	1.0
Coolangatta	4.5
Darwin	3.0
Hobart	3.0
Launceston	2.5
Melbourne	4.0
Perth	5.5
Townsville	1.0

Sources: Costello (Treasurer), Direction No. 12, June 1997, and Direction No. 13, May 1998.

The formula

The price-cap formula measures annual changes in the prices of the aeronautical services for each airport. It is a modified revenue-weighted average price. The formula takes the percentage change in price of each charging component (for example, landing charges), weights this by the revenue share in the previous period, and then sums over all components.[6] This is referred to as the 'tariff basket' approach (see chapter 10 for a discussion).

Under- and over-recovery

According to the DoTRD Pricing Policy Paper, the ACCC will not object to price changes unless they breach the price cap. Airport operators therefore can continue to 'rebalance' charges within their airport's overall price cap (DoTRD 1996).

6 For more information on the price cap formula see Direction No. 20, October 2000, and ACCC (1997a).

Under-recoveries, where prices are below the cap in a particular year, can be carried over between years within the five-year price-cap period. Over-recoveries, where prices exceeded the price cap, must be passed back to customers within two years from the period of over-recovery (except in the case of year 4, where it is to be passed back fully in year 5).

New or varied charges

New or varied charges on existing aeronautical services, and charges on new or varied services, are factored into the price cap — compensating reductions in other charges may be required to ensure compliance with the cap. In the case of new charges (such as vehicle access charges at Perth Airport), in the transition year, revenue from the new charge is allocated to other charging components, for example, landing charges, in proportion to their previous period revenue share (ACCC 2001d).

Cost pass-through

Under Direction No. 20, the ACCC allows 100 per cent pass-through in the price cap of mandated security requirements and congestion charges employed as part of an airport demand management scheme under the Airports Act (described in section 3.3 below).

Pass-through provisions also exist for necessary new investment (NNI).

Necessary new investment

The price-cap arrangements allow airport operators to seek charges in excess of the price cap to recoup costs associated with NNI. The DoTRD Pricing Policy Paper explained:

> While price caps on aeronautical charges are directed towards ensuring that there is no abuse of the potential market power of the airport operators, price oversight arrangements dependent solely on these price caps may restrict the timely development of necessary new aeronautical infrastructure.
>
> As a result, some flexibility is afforded airport operators to rebalance charges **outside** the price cap. In particular, operators need sufficient incentive to invest in new infrastructure, and the ability to meet the costs of necessary new investment. (DoTRD 1996, p. 4)

The operator can seek to recoup these costs where price rises are required to fund the new investment and 'users with a significant interest in the new investment support the investment, including the associated charges' (DoTRD 1996, p. 4).

ACCC assessments of proposals by airport operators to increase charges to recover the costs of investment are undertaken in the context of specified guidelines (box 3.2).[7]

Box 3.2 **Assessment of proposals for charging increases related to necessary new investment — guidelines for the ACCC**

These criteria will, where relevant for its purposes, guide the ACCC in its assessment of proposals related to necessary new investment to increase aeronautical charges at a rate in excess of the CPI-X cap:

(a) the operator's plans for new investment or service innovation and the associated costs;

(b) the relationship between the proposed increases in aeronautical charges and the costs (including the level of rate of return) of the new investment or service;

(c) support from airport users with a significant interest in the investment for the operator's proposals, including in relation to charging changes;

(d) contribution of the new investment/service to productivity improvements at the airport;

(e) overall efficiency of the airport's operation;

(f) the particular demand management characteristics of individual airports, including any demand management schemes in place, capacity constraints and any underutilisation of airport infrastructure;

(g) airport performance against quality of service measures, including services under the control of the airport operator;

(h) airport performance vis a vis other Australian airports and any comparable international airports; and

(i) the extent to which the proposed investment will facilitate the operations of new entrants to domestic or international aviation.

While the ACCC must take the above into account in deciding whether to approve a proposal to increase charges outside the cap, each proposal will be considered on its merits having regard to the information available to the ACCC. The weight provided by the ACCC to each of the criteria (a) to (i) may vary on a case by case basis.

Consistent with the provisions of the *Prices Surveillance Act 1983*, where the ACCC does not approve a proposal to increase charges outside the price cap, it will provide a statement of reasons for its determination. (Extract from DoTRD 1996, attachment B)

Source: DoTRD (1996).

Price-cap arrangements do not define the term 'necessary new investment'. Moreover, according to the ACCC, although an amount of investment was factored

7 These guidelines are set out in the DoTRD Pricing Policy Paper (DoTRD 1996), and replicated in Direction No. 20, October 2000.

into the X value for each airport, specific investments were not detailed (ACCC 2000b). In this regard the Department of Transport and Regional Services (DoTRS) stated:

> There is no mandated or required level of capex [capital expenditure] related to the revenue airports receive under the pricing cap, thus no basis for revisiting which investments are paid for and which are not. The slate must be considered clean, or else every other element used in setting the price cap will become equally open to debate. (DoTRS letter to Ansett, 30 April 1999, p. 2, cited in ACCC 2000b)

Following industry consultation, the ACCC, as administrator of the price cap and assessor of NNI proposals, defined the words 'necessary', 'new' and 'investment' in order to be able to distinguish between NNI and other forms of airport expenditure (ACCC 2000b). For example, the ACCC assessed several projects proposed by Perth Airport and decided that some projects did not fall within its definition of new investment (ACCC 2000c).

The ACCC's implementation of the NNI provisions of the price-cap arrangements is discussed in chapter 8.

Quality of service monitoring

The Airports Act (described in section 3.3) provides for the ACCC to undertake monitoring of quality of service provision by airport operators at core-regulated airports as a complement to price regulation. Quality of service 'will be taken into account by the ACCC in its deliberations on pricing proposals' (DoTRD 1996, p. 6), including in its assessment of airport compliance with the price cap and its consideration of prices notification by Sydney Airport.[8]

Quality of service monitoring, together with the provision of airport company accounts to the ACCC, is intended to assist in improving the transparency of airport performance. In this capacity, monitoring is intended to discourage airport operators from providing unsatisfactory service quality associated with abuse of market power, to encourage them to provide information as a basis for improved negotiation between them and airport users, and to assist the Government to address other public interest matters relating to the regulation of airports (ACCC 1997b).

Under the Airports Act, the ACCC is limited to monitoring the services and facilities provided by, or which could be influenced by, airport operators. Hence the ACCC does not directly monitor service quality of other key organisations providing services at the airport, for example, airlines, Airservices Australia (ASA),

8 Direction No. 20, October 2000, and Direction No. 18, June 2000, respectively.

Australian Customs Service, Australian Quarantine and Inspection Service, Department of Immigration and Multicultural Affairs, and Australian Federal Police. As a consequence, key aspects of an airport's operations, such as domestic terminals leased to airlines, are not subject to ACCC monitoring.

Airport Regulations 1997, pursuant to the Airports Act, specify the performance indicators to be used by the ACCC in monitoring and evaluating the quality of airport services.[9] The ACCC uses approximately 50 indicators that cover the following services and facilities:

- airside (for example, taxiway and aerobridges);
- terminal services (for example, gate lounges and baggage handling); and
- ground access services (for example, car parking).

There are usually several indicators for each service. The services covered, and the indicators, for Phase 1 airports (Brisbane, Melbourne, and Perth) and Sydney Airport, are different in some respects from those for Phase 2 airports — Adelaide, Alice Springs, Canberra, Coolangatta, Darwin, Hobart, Launceston and Townsville airports.

The indicators specified for gates and aircraft parking services for Phase 2 airports are illustrative of the indicators used. They are:

- any change over time in the number of aircraft parking bays;
- any change over time in total area of designated bay area; and
- the change over time in satisfaction with the system, according to a questionnaire of airlines (*Airport Regulations 1997*, Schedule 2, Part 2).

Some indicators are static and objective, for example, the number of aerobridges, and others are subjective, such as satisfaction with check-in waiting time.[10] As the above example indicates, information on the indicators is sought from a variety of sources, including airport operators (information for static indicators), passengers (survey), airlines (survey), ASA and Australian Customs Service (survey).

Records to be kept by the airport operators, to be provided to the ACCC, are also set out in the regulations.[11] These vary between Phase 1 and Sydney airports, and Phase 2 airports.

9 Schedule 2, Parts 1 and 2.

10 'Static' indicators are presented by the ACCC in annual regulatory reports. They represent a snap-shot at a point in time. For example, Brisbane Airport had 11 international aircraft parking bays as at 30 June 2000 (ACCC 2001b).

11 Schedule 3, Parts 1 and 2.

Sydney Airport

Price regulation for Sydney Airport differs in some respects from that of other core-regulated airports. Aeronautical services at Sydney Airport are subject to prices notification under the PS Act but a price cap does not apply to those services. Aeronautical-related services are subject to price monitoring.[12]

Because Sydney Airport is not subject to the price-cap arrangements set out in Direction No. 20, the NNI provisions of this Direction do not apply. There is, however, another Direction (No. 18) that provides for Sydney Airport to seek an increase in charges for aeronautical services to cover NNI.[13] The criteria to be used by the ACCC in assessing Sydney Airport proposals are the same as those for the core-regulated airports that are subject to a price cap (box 3.2).

Quality of service monitoring at Sydney Airport takes place under the Airports Act. Moreover, the Minister for Financial Services and Regulation has directed the ACCC (Direction No. 18) to take account of quality of service information obtained from Sydney Airport in considering notifications to increase prices for aeronautical services.

The Minister also directed the ACCC to give consideration to the following when considering price notifications for Sydney Airport (in effect a dual-till approach):

> In assessing prices for aeronautical services, the Commission should not take into account the revenues generated, or costs incurred, in the provision of services other than aeronautical services. (Hockey, J., Minister for Financial Services and Regulation, Direction No. 22, April 2001)

3.2 Access regulation

The access framework applying to airports determines the airport services or facilities to be subject to access regulation, and sets out procedures for the terms and conditions (including prices) of access to be determined. There are two separate legislative instruments providing for access to airports — an airports-specific instrument (section 192 of the Airports Act) and a general instrument (Part IIIA of the *Trade Practices Act 1974* (TP Act)).

Other aspects of these acts that affect airport operations and have the potential to affect the prices of airport services are described in section 3.3.

12 Declaration No. 89, June 2000.

13 Direction No. 18, June 2000. Replaced Direction No. 15.

Section 192 of the Airports Act

Section 192 sets out an access regime for the privatised core-regulated airports. The access regime allows airport operators 12 months after an airport has been privatised (with a possible 12 month extension for Phase 2 airports) to have an access undertaking accepted by the ACCC. An access undertaking is a legally binding document setting out the terms and conditions under which access to the services provided by essential airport facilities will be made available to access seekers. If an undertaking is accepted by the ACCC, the services covered by the undertaking cannot be declared for the purposes of Part IIIA of the TP Act (see below).

If an undertaking is not accepted by the ACCC within the designated period, the Minister must determine that each 'airport service' at the airport is a declared service for the purposes of Part IIIA. There is no scope for appeal of an ACCC decision not to accept an undertaking, and an undertaking cannot be lodged once a service has been declared. The Minister is required to specify the expiry date of the determination, and no power is conferred on the Minister under section 192 to renew the declaration once it has expired (ACCC, pers. comm., 5 July 2001).

Rather than listing declared services, specified criteria for declaration are set out in subsection 192(5) of the Airports Act. The criteria are that the service:

(a) is necessary for the purposes of operating and/or maintaining civil aviation services at the airport; and

(b) is provided by means of significant facilities at the airport, being facilities that cannot be economically duplicated;

and includes the use of those facilities for those purposes.

Section 192 provides for the ACCC to determine whether or not a specified service satisfies the criteria and, therefore, whether it is an airport service covered by the Minister's declaration. Amendments were made to section 192 in 1998 (s. 192 (4A–D)) which gave the ACCC the power to make a written determination that a service is, or is not, an airport service without reference to the criteria in subsection 192(5). However, the ACCC has stated that a determination always will involve an assessment of the criteria in subsection 192(5), and only where application of the criteria will result in perverse outcomes, will the ACCC make a decision that appears inconsistent with the criteria (ACCC 1998g). A determination under the amendments can be disallowed by the Parliament under section 48 of the

Acts Interpretation Act 1901, and can be reviewed by the Federal Court under section 39B of the *Judiciary Act 1903* in limited circumstances.[14]

The ACCC may determine that a service is an airport service on its own volition, but generally will do so only on the application of an interested party. It will generally conduct a public inquiry, except where it is clear the service satisfies the declaration criteria (ACCC 2000a). If a service is determined to be an airport service, then the airport operator must negotiate commercial terms with access seekers, or submit to arbitration.

The Airports Act does not provide for appeal against a decision to declare a service as an airport service.[15] However, section 44K of the TP Act provides limited scope for appeals to be lodged with the Australian Competition Tribunal within 21 days of the Minister's automatic declaration of airport services at an airport.[16] There is currently no scope for appeal against undertaking decisions. Appeal rights for arbitrated terms and conditions of access exist under Part IIIA.

Melbourne and Perth airports lodged access undertakings with the ACCC in early 1998, covering a range of services within and outside the price cap. In its draft determinations, the ACCC stated it did not accept either undertaking because, in its view, the dispute resolution procedures were inadequate and the provisions of the undertakings were not of sufficient clarity to be enforceable (ACCC 2000a). Neither airport pursued lodgement of an undertaking beyond this point. (The lodgement of undertakings by Melbourne and Perth airports is discussed further in chapter 9.)

As no undertakings had been accepted by the ACCC prior to expiry of the designated period, the Minister determined that airport services at all privatised core-regulated airports were declared — until 30 June 2002 for Phase 1 airports and until 30 June 2003 for Phase 2 airports. This includes services provided by those other than airport operators, such as freight operators and terminals leased by airlines. As noted above, there is no provision for the Minister to renew these declarations.

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14 Section 192(4A–B) is delegated legislation, which may be declared to be invalid by the Federal Court on the grounds of unreasonableness if it leads to manifest arbitrariness, injustice or partiality (ACCC, pers. comm., 29 June 2001).

15 Applications may be made to the Administrative Appeals Tribunal for review of decisions made by the Minister under the Airports Act (s. 242). However, this section is not applicable to access decisions.

16 Because the automatic declaration of 'airport services' at an airport does not refer to specific services, whether a specific service is declared will only be determined following an ACCC determination that the service is an 'airport service' as defined in s. 192(5). Unless such determinations are made within 21 days of the automatic declaration, the appeals processes prescribed in the TP Act are not available.

To date, the ACCC has received two applications for a determination on whether or not a service is a declared airport service under section 192. The applications — from Delta Car Rentals and Virgin Blue — both relate to services at Melbourne Airport.

As noted above, section 192 sets out an access regime for the privatised core-regulated airports. Airport services at Sydney Airport are not currently declared under section 192. However, the Part IIIA access regime does apply to Sydney Airport (and non-core-regulated airports — see section 3.4).

Part IIIA of the Trade Practices Act

Part IIIA of the TP Act establishes a legislative regime to facilitate third-party access under agreed or determined terms and conditions (including prices) to the services of essential facilities[17] of national significance in prescribed circumstances. Part IIIA is intended to apply when commercial negotiations fail to secure access to the services provided by an essential facility or when parties cannot reach agreement concerning the terms and conditions (including prices) of access. It applies to all incorporated and unincorporated businesses and Commonwealth, State and Territory government businesses, and thus applies, in principle, to all Australian airports, including core-regulated airports and airports operated by local government.[18]

In providing for access to the services of an essential facility, Part IIIA allows regulation of the terms and conditions for use of the facility. This is considered necessary because imposing an obligation to supply could be circumvented by the terms and conditions of supply, especially price.

Under Part IIIA, a third party can seek access to eligible services through one of three avenues:

- requesting that the National Competition Council (NCC) recommend that the responsible Minister *declare* access to those services;
- through a legally binding *undertaking* from the facility operator approved by and registered with the ACCC; or

17 Facilities that are the source of intermediate services essential to upstream or downstream service provision.

18 While all airports are subject to declaration, there may be limits on arbitration of access disputes. Under s. 44R, access disputes can only be dealt with if either the provider or access seeker is a corporation, or access is required for interstate trade or commerce (ACCC, pers. comm., 3 May 2001).

- through a State or Territory access regime *certified* by the responsible Minister as being effective following a recommendation by the NCC.

Specific criteria must be satisfied before access can be obtained through any of these avenues. While the exact criteria differ between the three avenues, in general, the criteria restrict access to the services provided by nationally significant natural monopoly facilities.

As no airport undertakings have been accepted by the ACCC (see above) and certification is not relevant in the case of access to airport services (Commonwealth access regimes currently are not covered by the certification provisions), parties seeking access to airport services under Part IIIA must request the NCC to recommend that the responsible Minister declare the service.

When assessing declaration applications, the NCC and the designated Minister must consider six criteria specified in the TP Act (ss. 44G(2) and 44H(4)):

(a) that access (or increased access) to the service would promote competition in at least one market (whether or not in Australia), other than the market for the service;

(b) that it would be uneconomical for anyone to develop another facility to provide the service;

(c) that the facility is of national significance, having regard to:

  (i) the size of the facility; or

  (ii) the importance of the facility to constitutional trade or commerce; or

  (iii) the importance of the facility to the national economy;

(d) that access to the service can be provided without undue risk to human health or safety;

(e) that access to the service is not already the subject of an effective access regime;

(f) that access (or increased access) to the service would not be contrary to the public interest.

If a service is declared, the service provider must attempt to negotiate mutually acceptable terms of access with an access seeker. If negotiations fail, the parties can appoint a private arbitrator to determine terms and conditions of access. If the parties cannot agree on an arbitrator, the dispute can be referred to the ACCC to determine whether, and on what terms and conditions, access should be provided. Access determinations are enforced via the Federal Court.

As noted above, section 44K of the TP Act provides for the service provider (if the Minister declares a service) or the access seeker (if the Minister decides not to declare a service) to apply in writing to the Australian Competition Tribunal for a review of the declaration decision. The application for review must be made within

21 days after publication of the Minister's decision. The review by the Tribunal is a re-arbitration of the access dispute, and the Tribunal may affirm, vary or set aside the Minister's decision.

To date, there has been only one case seeking declaration of an airport service under Part IIIA. In November 1996, Australian Cargo Terminal Operators Pty Ltd (ACTO) — a small business that provides cargo terminal services to international airlines — sought access to various freight handling and related services provided by facilities owned by the FAC at Melbourne and Sydney airports (chapter 9).

Part IIIA of the TP Act and the associated Clause 6 of the Competition Principles Agreement are currently the subject of a Productivity Commission inquiry. (For a more detailed discussion of Part IIIA, see PC (2001a).)

Other access arrangements

Access arrangements for privatised, core-regulated (and non-core-regulated) airports are also contained in the individual airport leases. Leases for Phase 1 and 2 airports that are publicly available contain similar access provisions, and require that the lessee at all times provides for the use of the airport site as an airport, and provides for access to the airport by intrastate, interstate and international (where applicable) air transport.[19] The leases provide for the lessee to comply with any demand management scheme under the Airports Act, and to refuse to give access to aircraft where an owner or operator of the aircraft has failed to pay any amount due for the use of the airport (and where the lessee has provided the Government with notice of its intention to refuse access), without being in default of these obligations.

While the access provisions in airport leases provide for access to airports by aircraft operators, they do not provide for determination of the terms and conditions of access. Nor do the access provisions provide for access by other airport users.

In some cases, access arrangements are also contained in airport sale agreements. For example, the sale agreement for Canberra Airport requires the airport operator to negotiate in good faith on access arrangements for the Very High Speed Train project (Commonwealth of Australia 1998b).

Some years prior to privatisation, long-term domestic terminal lease agreements between the FAC and the incumbent airlines, Qantas Airways and Ansett, were re-negotiated. Among other things, the re-negotiated lease agreements required the

19 Subject to a force majeure clause relating to the lessee's responsibilities in case of an event that is beyond the reasonable control of the lessee and prevents the lessee from providing for access.

incumbents, on application, to make gates at their terminals at some core-regulated airports available to new entrants — two gates each in Sydney and Melbourne and one gate each in Adelaide, Perth and Coolangatta. Ansett was also required to make a gate available in Launceston (IC 1992).

Access to ground-handling services by international airlines is covered in Australia's bilateral air services arrangements (section 3.3), which state that ground services shall be available on an equal basis to all airlines (DoTRS 2000c).

Most of the larger Australian airports have developed a general 'conditions of use' document which sets out physical arrangements, security and other requirements together with commercial conditions such as facilities provided, fees, services and indemnities that would apply for potential new airlines to obtain access to the airport. Similar documents exist or are being developed by airports to facilitate access by operators wishing to provide ground-handling functions at an airport (DoTRS 2000c).

3.3 Other relevant regulation for airports subject to price regulation

The core-regulated airports, including Sydney Airport, operate within a comprehensive and complex regulatory environment that includes both domestic (Commonwealth, and State and Territory) and international agreements. These airports are also subject to the terms and conditions set out in airport lease and sale agreements.

All of these regulations affect the operations of airports (directly or indirectly) and therefore have the potential to affect the prices of airport services. Moreover, the domestic regulations are administered independently by different regulatory agencies, yet often the effects of these regulations are related. For example, the ability of airports to comply with price-cap arrangements under the PS Act may be affected by their compliance with other (non-price) regulatory requirements.

Commonwealth regulation

Trade Practices Act

All of the core-regulated airports are corporations and are therefore subject to the provisions of the TP Act, administered by the ACCC. Provisions that may be of

relevance to airport operations include those relating to access to services (Part IIIA), and anti-competitive practices (Part IV).

Part IIIA of the TP Act is discussed in section 3.2. Part IV prohibits a range of anti-competitive practices. Arrangements or contracts that contain exclusionary provisions or have the purpose, or effect, of substantially lessening competition are prohibited, for example, price fixing, secondary boycotts and restricting supply (ss. 45-45EB).

Misuse of market power is also prohibited. A corporation that has substantial market power is prohibited from taking advantage of that power for the purpose of eliminating or damaging a competitor, preventing entry into any market and deterring or preventing a person from engaging in competition (s. 46).

Exclusive dealing and resale price maintenance are prohibited under sections 47 and 48 respectively.

The TP Act also prohibits mergers and acquisitions that would result in substantial lessening of competition in a substantial market (s. 50). With this in mind, the ACCC, which assesses proposed mergers and acquisitions, examined all bids for airport leases for potential breaches. In particular, the ACCC considered whether the operator of a major airport (Adelaide) would be permitted to lease a smaller airport (Parafield). The ACCC concluded that the acquisition would not substantially lessen competition (ACCC 2000a).

Airports Act

One of the key pieces of economic regulation of core-regulated airports, including Sydney Airport, is the Airports Act, and associated *Airports Regulations 1997*.[20] The Airports Act has a number of stated objectives, including to:

- promote the sound development of civil aviation in Australia;
- establish a system for the regulation of airports that has due regard to the interests of airport users and the general community;
- promote the efficient and economic development and operation of airports; and
- ensure diversity of ownership and control of certain major airports. *(Airports Act 1996*, Part 1, s. 3)

[20] The Airports Act was amended by the *Aviation Legislation Amendment Act 1997* and the *Airports Amendment Act 1999*, which, among other things, extended the period available for lessees to negotiate access undertakings. Neither Act made substantial changes to the key features of the Airports Act (box 3.3).

Some of the key features of the Airports Act relate to access, ownership controls, environmental management, building and construction controls, demand management and quality monitoring (box 3.3).

Box 3.3 **Key features of the Airports Act**

The Airports Act sets out a regime for the regulation of airports including:

- airport operators are subject to a 49 per cent limit on foreign ownership, a 5 per cent limit on airline ownership and a 15 per cent limit on cross-ownership for Sydney/Melbourne, Sydney/Brisbane and Sydney/Perth airports (Part 3);
- each airport must have an airport master plan approved by the relevant Minister. This 20-year forward plan identifies, among other things, development objectives, assesses the future needs of aviation users, forecasts noise exposure levels and includes proposals for land use and related development (Part 5, Div. 3);
- a major development plan (approved by the relevant Minister) is required for each major airport development, for example, constructing a new runway, constructing a new building or extending a taxiway or road (Part 5, Div. 4). The *Airports (Building Control) Regulations 1996* establish a system for approval of building and construction activity on airports;
- an environment strategy, also subject to approval by the relevant Minister, must specify, among other things, environmental management objectives and sources of environmental effects associated with airport operations (Part 6, Div. 2);
- an airport operator may be required to give accounts and reports to the ACCC (Part 7, Div. 3). In addition, the ACCC will monitor the quality of airport services and facilities (Part 8, Div. 1);
- regulations may implement certain international agreements (Part 10, Div. 8);
- an airport service will be a declared service for the purposes of the access regime under Part IIIA of the *Trade Practices Act 1974* unless an access undertaking is given within 12 months of privatisation (Part 13, Div. 2, s. 192). An airport may also be required to provide access for defence, emergency or disaster relief purposes (Part 9, Div. 10);
- the relevant Minister may formulate a demand management scheme for an airport, being either a category exclusion scheme, a slot allocation scheme, or a movement limitation scheme (Part 13, Div. 1). The Minister may also declare the capacity of an airport, in terms of the maximum number of aircraft movements an airport is capable of handling in a specified time period (Part 13, Div. 4); and
- ASA will oversee the provision of air traffic services and rescue and fire fighting services at airports (Part 14, Div. 10).

Source: Airports Act 1996.

Regulation under the Airports Act relating to access arrangements and monitoring of the quality of service at core-regulated airports is discussed in sections 3.2 and 3.1, respectively.

In general, provisions of the Airports Act apply to Sydney Airport as they do to other core-regulated airports. However, in some instances, the Act regulates Sydney Airport to a greater extent, for example, in relation to cross ownership and demand management. In other areas, Sydney Airport is subject to less regulation — it has been granted an extension on development of a master plan because of the proposed sale of the airport, and access provisions (s. 192) are not applicable until the airport is sold (described in section 3.2).

Other regulation

The main other Commonwealth regulations affecting core-regulated airports' operations, costs and pricing include:

- The *Air Services Act 1995*, and *Air Services Regulations* established the structure, functions and powers of ASA. ASA's functions include the provision of facilities to permit safe navigation of aircraft within Australian airspace and the provision of services, such as air traffic services, aeronautical information and radio navigation services, and rescue and fire fighting services (Part 2, Div. 2, s. 8). Although ASA directly charges airlines for its services, smaller core-regulated airports, such as Hobart Airport, contended that relatively high ASA charges precluded the airport from increasing its charges (Hobart Airport, sub. 11).
- The Civil Aviation Safety Authority (CASA), which conducts the safety regulation of civil air operations, was established in 1995 under an amendment to the *Civil Aviation Act 1988*. Among other things, CASA is responsible for establishing and enforcing aviation safety standards and for issuing aerodrome licences. The airport incurs expenses associated with maintaining the airport so that it complies with licence requirements.
- The *Environment Protection (Impact of Proposals) Act 1974* (and regulations) ensure that matters significantly affecting the environment are fully considered through, for example, environmental impact statements (EIS) and public inquiries. Airport activities that generate, or have the potential to generate, pollution or excessive noise are regulated by the *Airports (Environment Protection) Regulations 1976*, made under the Airports Act. Any compliance costs, for example the development of an EIS, must be met by the airport.
- All passengers, crews and freight (plants, animals and other goods) entering and departing Australia via airports are subject to customs control procedures

(*Customs Act 1901* and regulations). Passengers, freight, and the aircraft itself, may also be subject to quarantine procedures under the *Quarantine Act 1908*, *Imported Food Control Act 1992* and *Export Control Act 1982* (and regulations). Passengers also are subject to immigration controls under the *Migration Act 1958*. Outbreaks of contagious diseases in other countries, such as Foot and Mouth Disease in Britain, can have a substantial effect on the processing of passengers and freight at airports. Various Commonwealth agencies may be involved in the above controls including the Australian Customs Service, Australian Quarantine and Inspection Service, Department of Immigration and Multicultural Affairs, and Australian Federal Police. These services generally require substantial floor space which is provided by airport operators for nominal rent.

There are a number of other Commonwealth regulations that affect the operation of airports, and hence indirectly may affect pricing, including:

- The *Air Navigation Act 1920* and *Air Navigation Regulations 1947* regulate air navigation, such as international aircraft, international airlines, non-scheduled flights, aircraft on international flights, investigation of accidents, and aviation and airport security (including passenger and freight). In particular, the Act approves ratification of the Chicago Convention (see below). Pursuant to this Act, the *Air Navigation (Coolangatta Airport Curfew) Regulations 1999* prescribe curfew arrangements for Coolangatta Airport — certain aircraft movements are restricted between 11pm and 6am.
- The *Adelaide Airport Curfew Act 2000* (and associated regulations) imposes curfew restrictions similar to those at Coolangatta on aircraft movements at Adelaide Airport.
- Curfew arrangements at Sydney Airport are prescribed under the *Sydney Airport Curfew Act 1995* and associated regulations. As at Adelaide and Coolangatta airports, a curfew applies between 11pm and 6am. However, there are also several related restrictions controlling runways to be used during shoulder times on weekdays and weekends, international passenger aircraft movements and quota requirements applying to take-offs and landings. The Commonwealth Government has confirmed that the curfew will remain in place following the sale of the airport (Anderson and Kemp 2001).
- Slot management for aircraft arrivals and departures at Sydney Airport is regulated separately from other core-regulated airports (box 3.4).

Box 3.4 **Sydney Kingsford Smith Airport demand management**

The *Sydney Airport Demand Management Act 1997* prescribes a maximum of 80 aircraft movements in any hour and establishes a framework for a slot management scheme.[21]

Details of the system for allocating slots are set out in the Slot Management Scheme 1998 (made under the Airports Act), including grandfather rights to slots, the 'use it or lose it' test, how to apply for a slot, how slots are allocated and slot swaps. The slots are allocated and administered by the Slot Manager, Airport Coordination Australia.

One feature of the slot management scheme is the 'regional ring fence' which effectively creates a separate pool for regional slots. Special rules apply to regional slots. For example, a regional service operator that has no historical precedence to a slot may gain a permanent slot if it operates a service for two consecutive seasons (s. 10).[22] Moreover, if an operator with historical precedence to a regional slot does not apply for it, the slot must be offered to other regional service operators (s. 19).

Arrangements for the enforcement of compliance with the scheme are set out in the Sydney Airport Compliance Scheme 1998 — also made under the Airports Act.

The Commonwealth Government has confirmed that the 80 movements per hour cap and regional ring fence will continue after the sale of the airport (Anderson and Kemp 2001).

- A 'noise' levy is imposed (with exceptions) on the operators of jet aircraft landing at leviable airports under the *Aircraft Noise Levy Act 1995* and the *Aircraft Noise Levy Collection Act 1995*. An airport is deemed to be leviable if it meets certain criteria regarding residential exposure to particular noise levels. There are two leviable airports: Sydney and Adelaide airports. One exception to the levy is that it is not imposed on aircraft with assessed noise below a specified level.

Airport lease and sale agreements

The lessee of each core-regulated airport (including Sydney Airport even though it is not privatised) has signed a lease agreement and a sale agreement with the Commonwealth of Australia (the lessor).

21 A slot is defined under s. 34 of the Act as 'a permission for an aircraft movement'. A slot allocated under the scheme permits a specified aircraft movement at a specified time on a specified day.

22 Historical precedence to a slot is gained if the operator operates an aircraft movement using the slot (s. 6).

Lease agreements

The lease agreements set out, among other things, various obligations on the part of lessees.[23] For example, Australian Airports (Townsville), as the lessee:

- must comply with certain access conditions (described in section 3.2);
- must maintain the airport in good repair;
- must develop the airport at its own cost having regard to the actual and anticipated future growth in traffic demand, 'reasonably expected' quality standards and good business practice; and
- must, if the option to renew the lease has not been exercised, rebuild any structure damaged or destroyed during the last ten years of the lease to an agreed standard. In addition, any removal or demolition of structures during the last ten years must be approved by the lessor (Commonwealth of Australia 1998a).

Perusal of other publicly-available leases for Phase 1 and other Phase 2 core-regulated airports indicates that similar conditions apply across these leases. However, there are some variations in leases to account for specific characteristics of airports. For example, the Canberra Airport lease includes reference to the Fairbairn defence base sub-lease (Commonwealth of Australia 1998b).

Sale agreements

Publicly-available airport sale agreements also do not vary significantly between core-regulated airports in terms of the general contents. Each core-regulated airport's sale agreement contains, among other things, provisions relating to the transfer (sale) price, sale completion process, re-sale restrictions and superannuation. However, there are airport-specific variations to the agreements. For example, as mentioned above, unlike other airports, the Canberra Airport sale agreement contains a provision obliging the airport to negotiate in good faith concerning access arrangements for a potential very high speed train terminal (Commonwealth of Australia 1998b). Moreover, clearly the agreements will differ to the extent that sale prices, deposits and so on vary between airports.

The sale agreements commit core-regulated airports to spend a specified amount of money on airport development, such as constructing a new runway, constructing a new passenger terminal or extending an apron. The airport is committed to outlay a specified sum of money in each of two time periods — the first period being within five years of the lease, and the second period being five years thereafter. The sale

23 These agreements also include obligations on the part of the lessor.

agreements also include provisions on non-compliance, including mitigation due to economic factors, such as a shortfall in the targeted increase in passenger numbers.

State and Territory regulation

In the absence of Commonwealth regulation, core-regulated airports and their business activities are subject to State/Territory regulation. Even though environmental, planning and building controls are predominantly Commonwealth, State/Territory legislation applies, for example, in the areas of waste management and occupational health and safety.

State/Territory regulation, such as fair trading legislation, also relates to on-site commercial trading, gambling, liquor licensing and vehicle parking at airports.[24] The transition to State/Territory regulation in these areas was aided by the promulgation of *Airports (Control of On-airport Activities) Regulations 1997*. Businesses operating at the airports are also subject to State/Territory regulation.

Capital Airport Group (Canberra Airport) commented on the considerable degree of Territory (box 3.5), Commonwealth, and even State regulation with which it has to comply and, in particular, that on occasions the regulation between these jurisdictions appeared to overlap. For example, in the planning area, the National Capital Authority overlaps with the Commonwealth airport building controller and airport environment officer (Capital Airport Group, pers. comm., 30 April 2001).

There are few State/Territory regulations that are specific to airports or aviation. Most relevant is the *Aerodrome Fees Act 1998* in South Australia that gives private and public owners of former Commonwealth airports the statutory authority to recover fees from users who endeavour to avoid payment. Other States that have addressed this issue have done so through the amendment of existing legislation, for example, New South Wales amended its local government act.

24 Fair trading legislation substantially mirrors the consumer protection provisions of the TP Act.

Box 3.5 **Territory/State regulation (and regulators) affecting the operation of Canberra Airport**

Some of the Territory/State regulation (and regulators) affecting the planning, and development and construction, at Canberra Airport are:

Planning

- National Capital Authority;
- ACT Planning and Land Management;
- Environment ACT;
- ACT Retail Leases Code;
- ACT Tree Preservation legislation; and
- NSW Department of Urban Affairs and Planning (land use planning in flight path corridors).

Development and Construction

- Building, Electrical and Plumbing Control Regional Office, ACT Government;
- ACT Electricity and Water;
- ACT Stormwater;
- ACT Fire Brigade; and
- ACT Public Health.

Source: Capital Airport Group, pers. comm., 30 April 2001.

International agreements

International agreements have an effect, both directly and indirectly, on the operation of core-regulated airports — these airports are 'designated' international airports under the *Air Navigation Act 1920*.[25] Perhaps of most significance is the *Convention on International Civil Aviation* (Chicago Convention), a multilateral agreement signed in 1944 by Australia and other countries at the Chicago Conference. As noted above, the *Air Navigation Act 1920* approves the ratification by Australia of the Chicago Convention (including Protocols) and reproduces the Convention as Schedule 1 of the Act.[26]

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25 Brisbane, Melbourne, Perth, Adelaide, Sydney and Darwin airports are designated 'major' international airports. Designated 'restricted use' and 'alternate' international airports are Canberra, Coolangatta and Townsville. Hobart is a designated 'restricted use' international airport. Launceston and Alice Springs are designated 'alternate' international airports. Currently there are no international RPT operations at several of these airports, for example, Hobart, Launceston and Townsville airports. However, there have been international RPT operations in the past at some of these airports, for example, Hobart and Townsville. The designated international status of leased non-core-regulated airports and other airports is described in section 3.4.

26 Several Protocols amending or supplementing the Chicago Convention have been approved by the International Civil Aviation Organization over the ensuing years.

The Chicago Convention is the legal foundation for the regulation of world civil aviation and includes several articles that bear directly on economic regulation of aviation, and hence affect airport operations and pricing (box 3.6).

Box 3.6 **The Convention on International Civil Aviation**

Key economic regulatory features of the *Convention on International Civil Aviation* (Chicago Convention) include:

- State sovereignty over airspace (Article 1);
- rules governing permission for international non-scheduled and scheduled air services in contracting States (Articles 5 and 6);
- cabotage: contracting States may refuse permission for aircraft from other contracting States to take on its passengers, mail etc (Article 7);
- regulations of the contracting State regarding entry, customs, quarantine etc must be complied with by other contracting States (Article 13);
- airports in contracting States that are open for public use by national aircraft must be open under uniform conditions to aircraft from other contracting States. Airport charges for aircraft from other contracting States should be no higher than those for national aircraft (Article 15);
- air navigation should be expedited and unnecessary (particularly administrative) delays to aircraft, passengers, crews and cargo prevented (Article 22); and
- contracting States agree to provide airports and navigation facilities which facilitate international air navigation and are in accordance with the Convention. Operational systems should also be in accordance with the Convention (Article 28).

Source: Convention on International Civil Aviation.

The Chicago Convention (Article 44) also established the International Civil Aviation Organization (ICAO), a world-wide intergovernmental organisation seeking to promote the safe and orderly development of international civil aviation. As a United Nations agency, it 'sets international standards and regulations necessary for safe, regular, efficient and economical air transport and serves as the medium for co-operation in all fields of civil aviation' (ICAO 1996, p. 3.4-1).

The ICAO develops and releases, among other things, various policies and guidelines on the regulation of air transport (for example, on airport charges, capacity and tariffs), manuals (including one to provide guidance to airport managers) and technical annexes to the Chicago Convention dealing with areas such as aeronautical communications, ground handling, meteorology, operations and security.

Another major agreement signed at the Chicago Conference was the *International Air Services Transit Agreement* (known as the Two Freedoms Agreement) which provides for the multilateral exchange of rights of overflight and non-traffic landing for scheduled international air services among contracting States. Australia's ratification of this agreement has been approved under the *Air Navigation Act 1920*.

The General Agreement on Trade in Services (GATS) has the potential to affect airport operations through the liberalisation of international trade in air services. As a member of the World Trade Organization, Australia is required to accept the GATS as part of the outcome of the Uruguay Round of multilateral trade negotiations concluded in 1994.

GATS coverage of air services is limited. The Annex on Air Transport Services to GATS excludes aviation with three exceptions where GATS commitments apply: aircraft repair and maintenance services; selling and marketing of air transport services; and computer reservation system services. However, these services are covered only if member countries schedule them as specific commitments. Progress generally has been slow — Australia has not yet scheduled all three.

Bilateral, rather than multilateral, agreements (air service arrangements) are a feature of the regulation of international air services. Australia has over 50 bilateral agreements. Essentially, they define the terms and conditions under which airlines of either party will have access to the airspace of the other party. Provisions typically include the specification of capacity, frequency, routes, cities, ownership provisions and price approval processes (PC 1998a). For example, Australia's agreements with Japan and Italy guarantee the designated airlines of these countries access to particular Australian airports and specify the capacity on those routes. Such agreements may directly affect airports by placing limits on international traffic.[27] Airports therefore may be limited in the amount of business they can attract.

However, the nature of bilateral agreements involving Australia is changing. The Productivity Commission examined bilateral agreements, among other things, in its inquiry into International Air Services (PC 1998a). It recommended that Australia, as a step towards further liberalisation of international air services, should seek to negotiate reciprocal 'open skies' agreements on a bilateral basis which would remove various restrictions, including those on passenger and freight capacity and frequency, routes, multiple destinations, prices and cabotage. The Commission also recommended that 'Australia should offer unlimited capacity to fly to all airports other than Sydney, provided that Australian carriers are offered the same routes on a reciprocal basis by their bilateral partners' (PC 1998a, p. 233).

27 Australian agreements relate to RPT, not charter flights.

The Commonwealth Government has implemented most of these recommendations (Costello and Anderson 1999) and is currently re-negotiating bilateral agreements with other countries towards a target of open skies (for example, Singapore, United Kingdom and United States).[28] In November 2000, Australia's first open skies agreement — with New Zealand — was signed (Anderson and Gosche 2000). This move towards liberalisation of international air services is likely to assist airports, where capacity exists, to gain increased international passenger traffic.

International carriers with access must be treated in accordance with GATS, the Chicago Convention and bilateral agreements. Airports have an obligation to abide by the intent and spirit of the agreements negotiated by their governments. If an international carrier considers that a breach may have occurred it may ask its government to take up the complaint with the Australian Government. As noted above, the Airports Act (Part 10) provides for the introduction of regulations to require an airport operator to comply with particular international agreements. Penalties apply to non-compliance. An example of such a complaint occurred in the 1980s when US carriers alleged that the UK Government (Heathrow Airport operated by British Airports Authority) had breached the user charges article in the Bermuda II agreement — a bilateral agreement between the United Kingdom and United States. The US Government took the complaint of the carriers to the UK Government. An arbitral tribunal was established to adjudicate the issue (Toms 1994).

Apart from the ICAO, the other major international body to influence the regulation of international air services is the International Air Transport Association (IATA). IATA, established in 1945, is a trade association currently representing over 230 airlines. Its stated goals include:

- providing safe, reliable and secure air services;
- developing cost-effective, environmentally friendly standards and procedures to facilitate the operation of international air services; and
- identifying and articulating common industry positions and supporting the resolution of key industry issues (IATA 2001).

IATA coordinates and standardises technical, operational and commercial aspects of airline operations through its committee work, and it acts as a clearing house for inter-airline accounts. For example, voluntary scheduling conferences provide a forum for reaching consensus on schedule adjustments necessary to meet airport

28 The Commonwealth Government has not implemented the Commission's recommendations in full. For example, it has not removed restrictions on cabotage, and unlimited capacity will be offered only for international airports other than Melbourne, Brisbane and Perth, as well as Sydney (Costello and Anderson 1999).

capacity constraints, and tariff coordination conferences enable the discussion of, and agreement on, 'reference fares' for passenger fares and cargo rates to facilitate interlining and the division of revenue between interlining airlines.[29]

3.4 Regulation of airports not subject to price regulation

Most airports in Australia are not subject to price regulation — they cater for general aviation traffic rather than RPT (chapter 2). The regulatory environment differs depending on whether or not these airports are leased from the Commonwealth.

Leased non-core-regulated airports

Several non-core-regulated airports have been leased by the Commonwealth and privatised: Mount Isa, Tennant Creek, Archerfield, Jandakot, Moorabbin and Parafield. In addition, three Sydney basin airports (Bankstown, Camden and Hoxton Park) and Essendon Airport have been leased but are yet to be privatised.[30] (Sydney Kingsford Smith Airport — a core-regulated airport — was discussed in previous sections of this chapter.) These ten airports, which are not subject to price regulation, must, however, comply with other Commonwealth legislation applying to core-regulated airports, including the Airports Act (described in section 3.3).

Some of the provisions of the Airports Act, such as the access provisions (s. 192) and quality of service monitoring (Part 8), do not apply to these ten airports because they are not core-regulated airports. However, the Act does apply where airports are specified in the regulations. For example, all of these airports, except for Mount Isa and Tennant Creek, are specified in the *Airports Regulations 1997* for the purposes of land use, planning and building controls. Hence they must meet the requirements of Part 5 of the Act, including the development of a master plan.

Airport lease agreements for these leased non-core-regulated airports are similar to Phase 2 core-regulated airport agreements, but with some airport-specific variation. For example, unlike Phase 2 core-regulated airports, Mount Isa Airport has no provisions in its lease for the costs of an airport environment officer.[31]

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29 Interlining involves connecting passengers between two airlines on the same ticket.

30 As noted in chapter 1, the sale of Essendon Airport is scheduled for completion in September 2001 and the Sydney basin airports are to be sold in the second half of 2002.

31 Pursuant to the Airports Act, the *Airports (Environment Protection) Regulations 1997* exempts Mount Isa Airport from the environment provisions of Part 6 of the Act.

Sale agreements for the airports that have been privatised are, in general, similar to those for core-regulated airports. However, one important difference is that these airports are not subject to airport development obligations under the agreement.

As with core-regulated airports, leased non-core-regulated airports are subject to State/Territory regulation where Commonwealth regulation does not apply.

Unlike the core-regulated airports, none of these airports are designated international airports. In the absence of international RPT services, international agreements are of substantially less relevance.

Other airports

Other non-core-regulated airports include regional airports with both RPT and general aviation, such as Orange, Mildura and Broome, and numerous smaller general aviation airports, for example, Lilydale and Pine Creek (chapter 2). Also included in this group is Cairns Airport. Over 200 airports are owned and operated by local government. Other airports are owned and operated by statutory government authorities, for example, Cairns, and the remainder are under private control.

These other airports are not subject to Commonwealth price regulation (described in section 3.1) or the provisions of the Airports Act. They are, however, subject to some other Commonwealth legislation (described in sections 3.2 and 3.3 above), for example, the *Air Navigation Act 1920* and Part IIIA of the TP Act.[32] Part IV of the TP Act applies to airports that are corporations. Airports that are unincorporated businesses are subject to State/Territory competition codes (a modified version of Part IV) enforceable by the ACCC.

Without the regulation of the Airports Act, State and Territory government regulation applies to this group of airports to a greater extent than airports leased from the Commonwealth. For example, as noted above, planning and approval of building and construction at Commonwealth leased airports is regulated by Commonwealth legislation. State and Territory legislation applies to building and construction activity at these other airports.

International agreements are of little relevance to these airports because very few are designated international airports, and when they are designated, it is generally

32 All Australian airports are subject to declaration under Part IIIA of the TP Act. However, under s. 44R, there may be limits on arbitration of access disputes for some regional airports, including those operated by local government (section 3.2).

on a limited basis.[33] An exception is Cairns Airport which has a considerable number of international RPT services. Some others, such as Broome and Port Hedland airports, have international RPT services from time to time (DoTRS 2000b). International agreements affect the costs and pricing of these airports in a similar manner to core-regulated airports (section 3.3).

[33] Designated international airports (either 'restricted use' and/or 'alternate', 'non-scheduled' or 'external territory') in this 'other' airports category are: Cairns, Avalon, Broome, Coffs Harbour, Learmouth, Lord Howe Island, Port Hedland, Dubbo, Kalgoorlie, Rockhampton, Tindal, Horn Island, Norfolk Island, Christmas Island and Cocos (Keeling) Island. Major designated core-regulated airports are listed in section 3.3.

4 Assessing the need for price regulation of airport services: some preliminary issues

Possible rationales for future price regulation of airport services are discussed in this chapter. Principles for efficient pricing of airport services and criteria for efficient regulation are also outlined.

4.1 Why regulate prices of airport services?

The terms of reference ask the Commission, in making its recommendations, to 'identify the rationale for any future prices regulation at airports' (para. 8(b)). Most rationales relate to potential abuses of market power by airports — in short, their potential to raise prices above costs and associated inefficient behaviour this may allow or promote.

Monopoly pricing

The *prima facie* rationale for price regulation of certain airports is their perceived market power and incentive to exercise it by raising prices above efficient levels. (What is meant by efficient pricing is discussed below.) This concern is reflected in the terms of reference which state that:

> the purpose of this inquiry is to examine whether new regulatory arrangements, targeted at those charges for airport services or products where the airport operator has been identified as having most potential to abuse market power, are needed to ensure that the exercise of any such power may be appropriately counteracted.

Airports have natural monopoly characteristics (chapter 5). Though the tendency towards natural monopoly arises from efficiency benefits (one airport in a particular location can provide services more efficiently than two), it inevitably reduces potential competitive pressures on airports. However, the extent of market power of a particular airport in practice will depend on a range of factors including the price responsiveness of air travellers to that destination, the share of airport costs in the airfare, airport substitution possibilities, and the cost structures of other input suppliers (chapter 5). Other factors, such as the potential for profits from

commercial activities at airports and countervailing power of airlines, may affect the incentive for and ability of airports to exercise fully any market power they possess (chapter 7).

Nonetheless, the concern remains that airports with market power will increase aeronautical charges above (efficient) costs, thus increasing airfares and reducing consumption of air travel. Inefficiently-high airport charges normally would also bring persistent monopoly profits for airports. In these circumstances, price regulation that promoted efficient aeronautical prices could deliver economic gains to the community considered as a whole, provided such regulation did not itself generate offsetting distortions and costs, and bring benefits to passengers and airlines at the expense of airports.

Other potential effects of monopoly

It has been suggested by the Board of Airline Representatives of Australia (BARA) (sub. 26) that airports with market power are likely to be inefficient in production (that is, they will allow their production costs to rise), and that they may under-supply quality. Airports with market power also may not invest efficiently. Thus an airport with market power might dissipate monopoly profits in inefficient, high-cost work practices because the absence of strong competition may reduce pressures on airport managers to perform efficiently. The likelihood of this occurring at privatised airports with market power is discussed in chapter 7.

To the extent that price regulation brought about more efficient pricing it might also reduce these 'by-product' inefficiencies. However, in practice, some forms of price regulation may have the opposite effect in promoting such forms of inefficiency, for example, by encouraging firms to 'pad' costs (chapter 10).

Airport access

In addition to pricing above (efficient) cost, market power of airports could also be used to discourage competition in downstream (or upstream) markets (BARA, sub. 26 and ACCC, sub. 38). This is more likely to occur where airports actively participate in those markets or can control competition in them. For example, an airport with market power might restrict 'front-door' access to competing, off-airport car-park providers. This could be achieved by levying a prohibitively-high charge and/or by denying the off-airport provider access to a conveniently-located drop-off/pick-up point at the airport. This is considered further in chapter 7.

However, because of strict limits on vertical integration of airports and airlines in Australia (chapter 3), airports appear unlikely to have a strong incentive to deny access to new airline entrants, provided the latter at least pay marginal cost and that the price does not undermine contracts with incumbent airlines.[1]

Rather than being a rationale for price regulation, denial of access to competing providers of ancillary services, or collusive actions between an airline and airport could be addressed more directly and satisfactorily by anti-competitive provisions of the *Trade Practices Act 1974*, or by access regulation. Price regulation itself is unlikely to be adequate to address access issues because access can be denied by employing means other than high prices (for example, by restricting access to conveniently-located apron and/or terminal facilities). Nonetheless, price regulation that prevented excessive across-the-board price levels could help prevent marginal airlines effectively being denied access, whether such denial was intended or not.

Airports as public infrastructure

Another suggested rationale for price regulation, not directly related to market power as such, is that airports provide essential infrastructure for users that give benefits to other industries — particularly the tourism industry. It is argued that airlines should not be expected to pay the full costs of providing these facilities when other industries benefit. However, though short-run, marginal-cost pricing will promote efficient use of existing airport assets, such pricing may not provide adequate returns on new airport investment and therefore may have perverse long-run implications for airport users (section 4.3). Thus price regulation that targets a price equal to short-run marginal cost is unlikely to be consistent with efficient long-term provision of airport services, unless it is accompanied by some form of subsidisation of those services.

Airlines (IATA, sub. 9, BARA, subs 26 and 41, Ansett, sub. 42 and Qantas, sub. 48) have suggested that aeronautical charges should be subsidised from non-aeronautical revenues of airports (the so-called single till) but, as pointed out in appendix C, such transfers may not promote efficiency and indeed may generate quite large efficiency losses. Alternatively, lower airport charges could be subsidised by taxpayers, though general taxation also involves deadweight efficiency losses.[2] It is a matter of weighing up the efficiency effects of each

1 As noted in chapter 3, airports are not permitted to deny landing access to planes (for safety reasons) but effectively could deny access by imposing a very high landing charge or by restricting access to other necessary ground infrastructure such as terminals or aprons.

2 To the extent that current regulated aeronautical charges at privatised airports fall short of costs of providing these services, and buyers factored this into their bids, the lease payments to the

financing option, including the option of airport users paying the full costs of the aeronautical services provided. The Commonwealth Government's decision to privatise Australian airports without mandating a single till suggests that it favours and, indeed, has implemented, the full cost approach. This was confirmed in April 2001 in relation to future regulation of Sydney Airport by the Minister for Financial Services, Mr Hockey, in a Direction (No. 22) to the ACCC.

Regulating airport profits

It has been argued by Professor Forsyth that the major rationale for price regulation is to limit the ability of airports to earn profits in excess of normal rates or return, even though such regulation is likely to have a net efficiency cost.

Thus he argued that:

> Price regulation lessens, rather than increases, the overall efficiency of airports. While not perfect, a private, unregulated airport is likely to perform better in pure efficiency terms than a regulated airport because of the efficiency costs of regulation. (sub. 5, p. 5)

But that:

> The dominant rationale in Australia for airport price regulation is one of eliminating excess profits from the use of market power. (sub. 5, p. 5)

While it may be the case that governments may see a need to regulate some firms in order to reduce perceived excess profits, the Commission has focussed its attention on the likely efficiency outcomes of various options, including no price regulation of airports.

4.2 Potential efficiency and distributional effects of monopoly pricing

As noted above, a major concern about the exercise of market power by airports — and the key rationale for price regulation — is that prices will exceed efficient levels, thereby reducing consumption. Principles of efficient pricing, given the nature of the airport business, are explored in section 4.3 below. Discussion in this section focuses on the economic cost of inefficient price levels, distinguishing between efficiency and distributional effects.

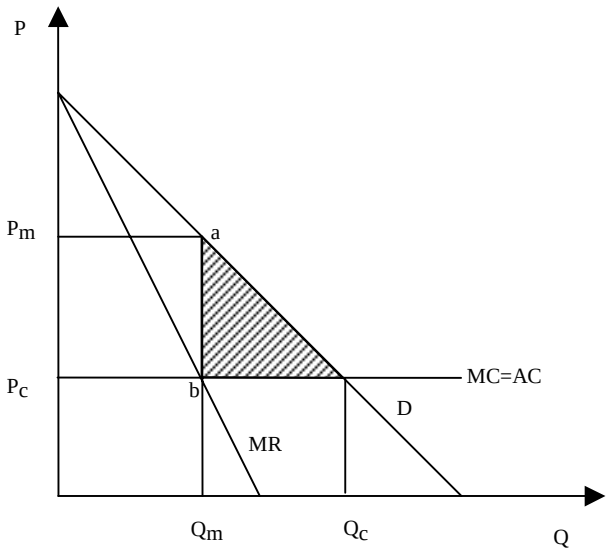
Commonwealth (and taxpayers) would have been lower than otherwise. In this sense, taxpayers indeed may be subsidising provision of airport services.

This latter distinction is drawn because it is the impact on efficiency that determines the net cost of monopoly to national economic wellbeing. Re-distribution of income, of itself, as the result of higher (or lower) prices — at least to the extent that income is transferred between Australian residents — does not involve efficiency losses. Typically, however, inefficient pricing involves both efficiency losses and income transfers.

Efficiency effects of monopoly pricing

Figure 4.1 depicts the cost and demand curves for a firm with monopoly power. For simplicity, it is first assumed that marginal costs are constant and therefore equal to average costs. Monopoly pricing with decreasing costs is discussed in box 4.1. The framework is static in the sense that it is concerned with efficient use of existing airport infrastructure.

Figure 4.1 **Efficiency and distributional effects of monopoly pricing**



A profit-maximising monopolist (assuming price discrimination is not feasible) will set a price, P_m, at which marginal revenue and marginal cost are equal. This price lies above the competitive, or efficient, price of P_c where price equals marginal cost and at which price potential economic surplus is greatest. At price P_m a lower quantity is consumed and supplied (Q_m) than if price were set equal to marginal cost (Q_c). The shaded triangle indicates the loss of allocative efficiency from the exercise of monopoly power. It shows the loss of consumers' value of the good or service (over the costs of provision) or the loss of consumer surplus less producer profits attributable to monopoly-restricted consumption and supply.

How large the efficiency loss will be depends on the firm's cost structure and the price elasticity of demand. For a given marginal cost, and assuming no price discrimination, the lower the demand elasticity, the greater the monopolist's optimal price mark-up over cost.[3]

Hence, the ACCC (sub. 36) has observed that the deadweight loss associated with monopoly power is likely to be greater the more inelastic is demand (unless the elasticity of demand is zero, in which case the optimal price mark-up is infinite but the efficiency loss is zero).

On the other hand, some participants have suggested that, if demand elasticities are very low, potential efficiency losses from airport market power also will be low (compared with efficiency losses if demand were more elastic). However, this result holds only for a price increase of a given amount, not for price increases that would accord with profit-maximising behaviour.

If the monopolist can discriminate in pricing — that is, set different prices for different consumers and/or units sold — efficiency costs will be reduced to the extent that marginal consumption is not discouraged. In the limit, it is feasible that the quantity provided by the monopolist is equal to the competitive level (Q_c), but with some consumers with a higher willingness to pay, paying much higher prices than P_c.

Some participants have argued that the efficiency costs of higher aeronautical charges would extend beyond the immediate effects in the market for the intermediate service, aeronautical services. The ACCC, for example, stated:

> There are further allocative efficiency implications where the service is also an intermediate input. High prices can distort production and consumption patterns of the goods and services using air travel as an input. For example:
>
> - Air travel is a business input for many companies. Higher prices can affect business input costs and the ability of such companies to compete in Australia and overseas.
> - Air travel is critical to the development of the tourism industry. Tourism is a major contributor to the Australian economy. High airport charges have the potential to damage both domestic and international tourism. (sub. 36, p. 6)

BARA also observed that the exercise of airport monopoly power would generate 'flow on inefficiency and costs in the broader economy' (sub. 26, p. 10).

It is almost certain that activity levels and prices in user industries will be affected by the exercise of any airport market power. The extent of the impact generally will

3 The optimal mark-up is the inverse of the price elasticity of demand for the monopolist's output, where the relevant elasticity is measured at the mark-up-inclusive price.

depend on demand and supply elasticities in these markets and the degree of competition in them. However, measures of efficiency losses in the (intermediate) market for aeronautical services resulting from airport market power generally will capture allocative efficiency losses in downstream markets. This is because the derived demand for airport services distils all the demands and supplies in downstream markets. The result holds provided demand and supply in downstream markets (encapsulated in the derived demand for aeronautical services), and indeed, in the market for aeronautical services itself, are not distorted. For example, provided there are no (positive or negative) spillover effects in downstream markets that are not already accounted for in prices, analysis need only focus on efficiency effects in the market for services provided by airports.

Distributional effects of monopoly pricing

In figure 4.1, at the higher price, P_m, there is a transfer equal to rectangle P_cP_mab from consumers to the monopolist. As noted above, however, provided this transfer is between Australian residents, there is no leakage of economic surplus abroad, though there may be concerns about the impact on income distribution between passengers, airline shareholders and airport shareholders.

Any monopoly airport profits will accrue to airport shareholders, some of whom are non-residents (most privatised core-regulated airports are partially foreign-owned, the maximum level being limited to 49 per cent — see box 3.3). But airport shareholders also comprise Australian residents, including superannuation funds investing on behalf of Australian contributors (for example, Motor Trades Association of Australia Superannuation Fund investments in Adelaide and Brisbane airports (sub. 22), AMP Henderson's 49.9 per cent ownership of APAC (sub. 10), Uni Super's stake in Adelaide Airport (AAL, sub. 20, p. 2)). The 'losers' from airport charges above efficient levels would be airline shareholders (comprising residents and non-residents) and airline passengers, both resident and non-resident.

Given these complications, Professor Forsyth observed that:

> In the airport regulation situation, it is not a matter of having some specified distributional trade-offs between the different groups. There is little by way of identifying who the gainers and losers are, and what their circumstances are. (sub. 5, p. 11)

In other words, it appears difficult to make a case for price regulation of airports with market power purely on distributional grounds. First, because it is difficult to determine whether passengers and airline shareholders who are Australian residents are more deserving of income transfers than Australian resident airport

shareholders. Second, because many airport users (airline shareholders and passengers) are not Australian residents. Indeed, if, on balance, lower airport charges transferred income from Australian residents to foreign residents, this would tend to reduce Australian real income. This cost would have to be weighed against other efficiency benefits of price regulation.

Efficiency effects of pricing below efficient levels

Figure 4.1 also can be used to demonstrate the effects of setting a price *below* the efficient, market-clearing price. This might occur when a price-regulated facility was approaching, or had reached, its capacity limit. If, for example, capacity were restricted to quantity Q_m, the market clearing price would be P_m. However, if the price were capped at P_c, for example, demand would exceed the amount being supplied (by the amount Q_mQ_c).

Without price rationing, this excess demand necessarily will result in some form of non-price rationing, formal or otherwise (for example, queuing or a quantity rationing scheme), and non-price rationing generally incurs efficiency costs. The magnitude of these costs will depend largely on the type of non-price rationing — under certain conditions, the costs incurred by queuing, for example, could dissipate the entire surplus and in itself involve economic loss. Queuing at an airport might involve aircraft being placed in holding patterns or being made to wait on the apron/taxiways for clearance to depart etc, imposing large costs on airlines by way of additional fuel consumption and delayed flights. Even with a more orderly rationing system, implementation costs of the system plus waiting periods for slot allocation, plus the likelihood that some airlines/consumers with high slot valuations will miss out, will generate real efficiency losses. In other words, a regulated price below the efficient price may incur efficiency costs larger than the efficiency costs incurred under monopoly.[4]

Moreover, if rationed slots were allocated (not sold) to airlines, the airlines effectively would hold quotas, the value of which would reflect the willingness to pay of passengers arriving or departing from the capacity-constrained airport. In other words, airlines will have an incentive to charge passengers the market-clearing price P_m for accessing the airport, while they pay P_c to the airport. Thus the airlines rather than passengers will capture at least some of the scarcity rents (equal

4 This assumes that the monopolist minimises costs and does not engage in any other wasteful, rent-dissipating behaviour.

to area $P_m abP_c$).[5] The airlines might retain this rent as profit or use it to cover the fixed costs of providing services on more marginal routes.

4.3 Principles of efficient pricing of airport services

The case for price regulation rests on a comparison of the likely efficiency costs of unregulated airport pricing and the likely outcomes under price regulation. This, in turn, requires an understanding of what is meant by efficient airport pricing.

Market prices typically perform several roles — they ration use of existing assets and scarce resources (promoting 'static' efficiency), they indicate the opportunity cost of using those resources and they signal the need for investment/disinvestment in a particular activity (promoting 'dynamic' efficiency). Efficient pricing of airport services similarly should aim to promote static and dynamic efficiency.

Decreasing costs and efficiency

Static allocative efficiency, in the sense of the best use of existing assets, generally requires prices equal to (short-run) marginal cost. Where marginal costs are equal to or above average costs, pricing at short-run marginal cost, in the long-run, also will ensure that average total costs are covered — that is, efficient producers will receive a 'normal' rate of return on their investments.

However, as shown in figure 4.2 (box 4.1), where marginal costs lie below average total costs for relevant ranges of output — which may be the case for uncongested airports — marginal-cost pricing (for all units sold), at P_c, will not provide an adequate return on existing assets and, of greater relevance for economic efficiency, will not provide adequate incentives for airports to undertake efficient investment, replacement or otherwise. In short, short-run (uniform) marginal cost pricing is unlikely to be a relevant or efficient price when costs are decreasing.

It is conceivable that, if capacity utilisation is being approached or has been reached, short-run marginal (opportunity) cost pricing may generate very high prices.[6] Thus, over the life of the asset, if demand increases over time and for long enough periods, costs (eventually) might be recovered by marginal (opportunity) cost pricing. However, this pricing model probably will not be adopted in

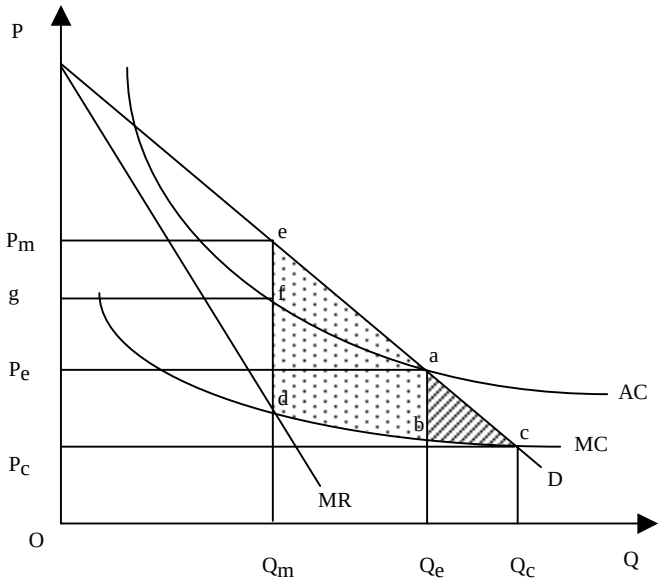
5 For reasons discussed above, likely inefficiencies in the allocation system will reduce this area somewhat.

6 Marginal opportunity costs will incorporate the marginal cost of supplying the service which may increase with high utilisation levels plus, for example, congestion costs incurred by users.

practice: in the absence of regulation, long-term contracts, or longer-term horizons by airport operators, or just the transaction costs of continually adjusting prices, probably would smooth the peaks and raise the troughs that might otherwise exist. Moreover, such charging — which means that prices could reach very high levels in some periods — is often infeasible for political reasons.

Box 4.1 **Monopoly pricing with decreasing costs**

Figure 4.2 shows a firm where, over the relevant range, marginal costs lie below average costs. This means that if price is set equal to marginal costs (P_c), full costs of providing the service will not be covered. If the firm is required to be self-financing, average prices charged must cover average costs. This could be achieved by levying a uniform price equal to P_e (with a consequent efficiency loss equal to abc) or levying discriminatory charges, such that those consumers with higher willingness to pay contributed more to fixed costs than those with lower marginal valuations. To the extent that marginal units are priced close to or at marginal cost, total costs will be recouped while minimising any efficiency loss.



A firm with market power will have the capacity to raise charges beyond cost-recovery levels. If constrained to set a uniform price, a monopolist will increase the price to the point that marginal cost equals marginal revenue (P_m). At this price, efficiency losses equal all shaded areas in figure 4.2 — that is, the excess of marginal valuation of the service over marginal cost for all units forgone (from Q_c to Q_m), with the area edba representing the efficiency loss attributable to monopoly pricing above average cost. At price P_m the monopolist earns excess profits equal to $efgP_m$, while consumers are worse off by an amount equal to the area eaP_eP_m. Once again, however, if the monopolist can price discriminate (and a monopolist will have an incentive to do so to increase profits), it is feasible that the marginal consumers will not be priced out of the market.

Thus, efficient pricing for firms that exhibit significant economies of scale (and which, like privatised airports, are required to be self-financing) generally must depart from all prices being set at short-term marginal cost.[7] Though such pricing might suggest an efficiency loss (compared with marginal-cost pricing) equal to the shaded area abc in figure 4.2, the point is that, in the absence of government subsidy, uniform marginal cost pricing is not consistent with sustained provision of the facility and the services it provides.[8] Therefore, *given a requirement to cover total costs*:

- efficient (uniform or average) prices typically will exceed short-run marginal cost so as to signal the need for, and provide an adequate (risk-inclusive) return on, incremental investment, but will not be so high as to generate substantial, persistent, excess profits. In figure 4.2, this means a price of P_e rather than the profit-maximising price of P_m or the short-run marginal cost price of P_c;
- in other words, the price for services provided by existing infrastructure should signal to users and suppliers the full long-run cost of continuing to supply those services; and
- whether this price provides an adequate return on existing assets essentially is immaterial to efficiency considerations.[9] In order to promote static and dynamic efficiency, today's prices should signal the incremental cost of (efficiently) maintaining services into the future. Therefore, current prices may be such as to generate adequate returns, windfall gains or windfall losses for current investors. The efficient price level will be determined by the need for, and cost of, investment to maintain services in the longer term.

Kahn summarises:

> … partly because of the infeasibility of permitting prices to fluctuate widely along the SRMC [short-run marginal cost] function … the practically achievable benchmark for efficient pricing is more likely to be a type of average long-run incremental cost, computed for a large, expected incremental block of sales, instead of SRMC, estimated for a single additional sale. This long-run incremental cost … would be based on

7 Nonetheless, even at low utilisation levels, short-run marginal cost pricing of, and under-recovery on, existing infrastructure may be efficient (in the sense of promoting efficient use of the asset and maximising surplus) *provided* the existing infrastructure does not need to be augmented or replaced (eg because there is no long-term demand).

8 Of course, even if a government subsidy were provided, there would be deadweight costs associated with raising the necessary taxes. Moreover, the provision of subsidies to make up cost shortfalls for public utilities may introduce incentives for cost padding and dynamic inefficiencies.

9 However, this does not mean that today's prices should be set, as a matter of regulatory policy, as though all existing assets are sunk. Indeed, such a policy may generate efficiency losses over time because firms will factor sovereign risk into their required rate of return for regulated assets.

(1) the average incremental variable costs of those added sales and (2) estimated additional capital costs per unit, for the additional capacity that will have to be constructed if sales at that price are expected to continue over time or to grow. Both of these components would be estimated as averages over some period of years extending into the future. (Kahn 1988, vol. 1, pp. 84–5)

In the case of the core-regulated airports, under current regulation, there is scope for the regulated prices to be increased to cover the costs of necessary new investment. This provision is aimed at providing a reasonable rate of return on capital and thus appropriate incentives for dynamic efficiency. This might seem to overcome any potential problems arising from (regulated) low prices for services provided by existing assets. However, as discussed in chapter 8, this approach appears to have created a situation where airport users, because they are not paying prices for current infrastructure that reflect the full cost of maintaining airport facilities, may have some incentive to oppose new investment that will lead to higher average prices.[10] On the other hand, if current aeronautical assets effectively are written off by regulated prices, airport operators may have an incentive to bring forward new investment in order to earn a reasonable rate of return on assets.

Multi-part pricing and price discrimination

Even in the presence of large fixed costs and a requirement for a natural monopoly to be (just) self-financing, efficient levels of output may be feasible if the firm is not constrained to set uniform prices. Typically this will require some form of multi-part pricing such as different prices for different units sold to a customer (for example, an up-front access fee plus user charge) or different prices for different customers of the same or different goods and services (according to capacity to pay), or some combination of the two approaches. In this way, fixed costs can be allocated fully to customers, with marginal consumers and/or marginal sales making little, if any, contribution to fixed, common costs. In this way, the efficiency loss arising from uniform average cost pricing can be reduced or even eliminated — marginal units are sold at prices equal to short-run marginal cost. The limits of such pricing are set by the transaction costs (including information costs) of doing so, and the ability of the provider to prevent arbitrage across market segments.

Airports traditionally have charged according to the maximum take-off weight (MTOW) of aircraft and frequently this is characterised as roughly efficient Ramsey

10 If incumbent airlines bear a share of any congestion costs they may support new investment more readily because they will benefit from it. However, it seems that incumbents often consider they have de facto ownership rights over existing common-user facilities. Hence other airlines may bear a greater share of congestion costs (see, for example, Australian Airports (Townsville), sub. 14).

pricing.[11] As noted in chapter 7, larger planes generally fly longer, more expensive routes and the weight of aircraft per passenger increases with the size of plane. Thus, a higher absolute airport charge may comprise the same share of the ticket price for a (more expensive) long-haul airfare as for a (cheaper) short-haul flight (Forsyth, sub. 5). Moreover, once a decision to operate a flight has been taken, a landing fee charged per plane is essentially a fixed cost from the airline's viewpoint. The airline, in turn, can allocate the fixed landing charge across passengers according to their willingness to pay. In this way, passengers with the least elastic demand are likely to bear a higher share of the airport's fixed costs. There is also some evidence that airports discriminate in favour of marginal airlines and/or flights by offering concessions and rebates (chapter 7).

Peak charges and congestion pricing

Price differentiation may occur with respect to the timing of consumption, with different prices charged to peak and off-peak users, such that peak users bear a higher share of an airport's fixed costs.[12] Peak charges also will signal the opportunity cost of using the facilities and the need for additional capacity.

At airports experiencing congestion (that is, excess demand for landing slots at some, or all, times of day), weight-based charging may send the wrong signals to airlines — a small plane is charged less than a large one, even though the former may take up as much, or more, time on approach and on the runway. Uniform charges for aircraft for runway use, possibly combined with differentiated peak/off-peak charges, would be one way of restructuring prices. Another possible form of multi-part pricing is the sale or auction of landing slots (or sale of leases of slots) by airports combined with a user charge. This latter approach could combine congestion pricing (reflected in the higher access price paid for slots with excess demand) with marginal costs of using airport facilities.[13]

Some participants have suggested that, given the demand management system (slot allocation scheme) in place at Sydney Airport, price levels are largely irrelevant for

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11 Ramsey pricing involves setting prices according to consumers' willingness to pay — more formally, setting prices that are inversely proportionate to the elasticities of demand of different purchasers, or groups of purchasers, in order to minimise deadweight losses arising from prices above marginal cost, subject to the requirement to recoup full costs. Weight-based charging also may to some degree reflect differences in landing costs, though Doganis suggests the relationship of airport pricing to costs has been indirect at best (Doganis 1992).

12 Strictly-speaking, peak charging is not a form of price discrimination because peak users generate higher capacity costs than off-peak users. Price discrimination refers to different prices being charged for goods or services produced at the same cost.

13 For a discussion of slot auctions and slot trading see PC 1998 (chapter 8) and Ewers et al 2001.

efficient use of that facility. Suffice to say here that, though a slot management scheme can ration demand amongst airlines, it is not necessarily the case that airlines carrying passengers who value landing at peak periods the most obtain the slots, or that such schemes operate as efficiently as the price mechanism. Thus, as discussed in section 4.2, while market-clearing is attained with quantity rationing, because this is achieved by means other than price rationing, some economic inefficiency is likely to result.[14] Generally-speaking, price rationing of slots at congested facilities is likely to promote more efficient use of limited capacity as well as signal more explicitly and, therefore, more efficiently, the opportunity cost of using a congested airport, the viability of building a new airport and, indeed, the need for new investment at the congested facility itself. In these circumstances, a price delivering above-normal profits (for a limited period) may be appropriate.

Efficient pricing with locational rents and complementary demands

The single-till/dual-till issue pervades most participants' views about appropriate price regulation of airports. Even though core-regulated airports ostensibly were privatised on a dual-till basis, aeronautical charges continue to reflect to a significant degree (apart from price increases allowed for necessary new investment), historical, single-till pricing (chapter 8).

BARA, Qantas and Ansett (subs 41, 48 and 42) have submitted that a single-till approach is required for efficient pricing of airport services because, if airports operated in a competitive environment, all locational rents earned in non-aeronautical activities would be applied to drive down aeronautical charges.

This is a complex issue, but for reasons explained in chapter 10 and appendix C, the Commission does not agree with their assessment. In competitive markets, efficiency requires that users (on average) pay the long-run incremental cost of providing the good or service. Owners of scarce factors generally retain scarcity rents (after general taxation). It may be that costs of providing aeronautical services will fall as the result of an airport exploiting non-aeronautical opportunities and this will affect the efficient aeronautical price. It also may be the case that an airport operator rewards passengers (and/or airlines) that generate additional custom and profits. But there does not appear to be a strong case that efficient pricing *necessarily* requires the transfer of all airport locational rents to reduce aeronautical charges. To do so may well lower aeronautical charges below the marginal (long-run, or even short-run) costs of providing these services and discourage investment in them, as well as discourage development of valuable non-aeronautical activities.

14 Quantity rationing may be preferred to price rationing for distributional reasons. But the point remains that price rationing is likely to promote efficiency objectives better.

4.4 Principles of good regulation

Regulation is not costless. In addition to observable administration and compliance costs, regulators inevitably must make decisions based on imperfect information which, in turn, risk generating costs that may exceed the costs of inaction. As discussed above, efficient pricing of airport services has several dimensions. Addressing one dimension (for example, marginal-cost pricing that encourages efficient use of existing assets) may distort other dimensions (for example, incentives to invest or to provide appropriate quality levels). And the virtual impossibility of knowing what the efficient prices are, forces regulators to construct prices based on measurable, often historical costs, though these prices may have little relevance to and may not reflect opportunity costs.

As Starkie observed:

> Unfortunately, a little knowledge can be a dangerous thing; the incentive mechanisms themselves can lead to distortion and unnecessary costs … In turn, this can lead to further regulatory intervention, to complex regulation (possibly with significant compliance costs) and to increased regulatory risk that has the effect of increasing the cost of capital. At the end of the day, therefore, there is a trade-off between living with imperfect regulation or with imperfect markets. It is only when the market does not work well, when there is a clear case of natural monopoly *and* when regulation can reasonably be expected to improve matters that the regulatory option is worthwhile. Market imperfections alone are not a sufficient justification for intervention. (Starkie 2001a)

The over-arching objective of regulation should be that it promotes the national interest by achieving outcomes that are more efficient than those achieved by other forms of regulation and, indeed, outcomes with no regulation.

Thus, in assessing whether new regulatory arrangements 'are needed to ensure that the exercise of any such [market] power may be appropriately counteracted', as required by the terms of reference, the Commission has assessed and compared possible efficiency and distributional outcomes with and without regulation.

This assessment of each option reflects regulation review principles embodied in the Competition Principles Agreement (CPA).

The terms of reference also specify that any:

- 7(b) future prices regulation should be applied to those aeronautical services and those airports where airport operators have most potential to abuse market power; …
- 7(d) prices regulation should minimise compliance costs on airport operators and the Government;
- 7(e) prices regulation should promote the efficient operation of airports;

7(f) prices regulation should facilitate benchmarking comparisons between airports, competition in the provision of services within airports (especially protecting against discrimination in relation to small users and new entrants), and commercially negotiated outcomes in airport operations.

In essence, these criteria (which largely mirror the Competition Principles Agreement) suggest that any future regulation should be the least required to target the source of the problem and promote efficient outcomes, while being applied in a way that fosters market outcomes where feasible, imposes minimal compliance costs on all parties, and promotes transparency and competition.

In addition, in assessing the advantages and disadvantages of the current system of price regulation of airport services and possible options for future regulation, the Commission has been guided by the *Productivity Commission Act 1998*, and the broad regulation review principles developed by the Office of Regulation Review to implement the CPA (PC 1998b).

Several of these principles are reflected in the terms of reference, for example, that regulation should:

- promote overall economic performance;
- minimise the regulatory burden on industry consistent with efficient outcomes; and
- be transparent and low cost.

Other desirable principles of regulation include that, as far as possible, the regulation be predictable, promote certainty and be open to scrutiny and regular review.

5 Market power of airports

The terms of reference require that, in considering the need for price regulation of airports, the Commission should take into account that 'future prices regulation should be applied to those aeronautical services and those airports where airport operators have most potential to abuse market power'. This chapter examines sources of potential market power of airports, and the extent to which market power exists for particular airports in Australia. Chapter 6 examines the market power of particular services provided at airports in Australia. Chapter 7 considers the potential for abuse and consequences of market power.

5.1 Introduction

A firm can be said to have market power if it can sustain prices above the efficient cost of supply for a significant period of time.

Most firms have some market power. The degree of market power, and the extent to which it persists, depends broadly on barriers to entry to an industry and the availability to consumers of reasonably close substitutes (which is reflected in the price elasticity of demand). Thus, significant market power reflects a lack of alternative sources of broadly equivalent product(s) or service(s).

The potential negative effects of the exercise of market power for consumers or users and for the efficiency of resource allocation are the reasons that market power is cited as a rationale for price regulation of airports (chapter 4).

Preliminary issues in assessing market power

The next two sections examine the market power of airports in detail by considering barriers to entry (section 5.2) and the price elasticity of demand for a particular airport's services (section 5.3). However, some preliminary matters warrant brief discussion here.

First, the degree of market power a firm is assessed to have depends critically on how the market in which it operates is defined. The market should be defined so as

to identify fully any potential sources of substitution for the firm's products or services.

Market definition requires consideration of what is being demanded (and by whom); the geographic area of the market; the functional level of the market, that is, the position of the firm in the overall supply chain; and the timeframe — substitution possibilities, for instance, tend to be greater in the longer term. In terms of airports:

- Airports provide a number of services (chapter 2). To assess airport market power in these services, it is important to identify the services that are essential to airlines — and must be consumed as a bundle — and those that are optional, either in the quantity or quality consumed. This may vary depending on the airline customer. To the extent that they do not need to be consumed or supplied as a bundle, the degree of market power may differ across services. In addition, market power can vary depending on the main market segment being considered — for example business or holiday, international or domestic, traffic.
- The geographic dimension of a particular airport's market could be defined narrowly as the city in which it is located, or it could be defined more broadly as the region in which it operates. The appropriate definition will vary depending on the market segment — for example international or domestic — as well as the particular airport being examined.
- At a functional level, the question under examination may require that consideration be given to whether the market be defined as that for transport services, airport services, that particular airport's services, or for particular services at that particular airport. As noted by the ACCC (sub. 36), for this inquiry, initially it is worth considering the market for an airport's services rather than looking at particular airport services.
- The nature of the supply of and demand for some airport services may mean that, in the very short term, substitution possibilities are limited. To assess airport market power, enough time must be allowed for all market responses to be made to a price change. Professor King (ACCC, sub. 36, attachment C) suggested that an appropriate timeframe for an airport could be one to five years. Of course, if a very long time is required for the market to respond, that in itself could indicate market power.

These elements of market definition are part of the framework for assessing market power that was recommended by Professor King (ACCC, sub. 36, attachment C). The analysis of market power that follows is consistent with his suggested framework, although the formal structure of analysis differs somewhat.

Finally, it should be noted that, even where a firm has market power, the potential for its abuse can be mitigated by factors such as the countervailing power of users

and complementarities in demand. In addition, price discrimination may reduce efficiency losses that might otherwise result from the exercise of market power (chapter 7).

5.2 Airports and barriers to entry

A barrier to entry is something that gives an incumbent firm an advantage over a potential entrant. Barriers to entry can originate from supply or demand conditions, or from regulation. They need not be the result of a deliberate action by an incumbent firm.

In the case of airports, the main potential sources of barriers to entry appear to be natural monopoly characteristics and regulatory constraints.

Natural monopoly characteristics of airports

A number of conditions can generate natural monopoly (box 5.1), but the gist is that production of the good or service in question by one firm, at relevant production levels, is less costly than when produced by more than one. This may change over time, however, as demand and technology change.

Because of the weak direct competitive pressures faced by a natural monopolist, there may be concerns about potential abuses of market power. However, the very conditions that give rise to natural monopoly mean that there also may be efficiency benefits of having one supplier. Thus, there is an inherent tension between efficiency benefits and potential abuses of market power.

In the case of airports, natural monopoly characteristics arise from:

- investment requirements, economies of scale and economies of scope; and
- network benefits — which determine the extent to which airlines are willing to spread their services across more than one airport in any given location.

These characteristics affect industry structure, performance and the efficient pricing of airport services. However, the focus in this section is on the extent to which they create potential barriers to entry and exit, and thus hinder the entry of potential competitors.

Box 5.1 Conditions for the existence of natural monopoly

A natural monopoly is said to exist if, given the demand for a good, service or facility, one firm can produce a given set of outputs at a lower cost than two or more firms. The basic conditions for natural monopoly generally relate to the nature of costs and investment — such as investment indivisibilities, economies of scale, sunk costs and, in multi-product industries, economies of scope.

- Investment is said to be *indivisible*, or lumpy, when it can be undertaken economically only in large increments. To the extent that this makes the cost of establishing a new facility higher than the cost of expanding an existing facility, this can create an advantage for an incumbent supplier.
- *Economies of scale* occur when average costs decline as output increases. Investment indivisibilities can contribute to economies of scale by increasing the fixed costs of production. Given the existence of scale economies, any potential competitor would need to capture a large market share, or increase the total market, to be competitive. However, competition may not be efficient in this setting, to the extent that one producer can supply the market at a lower cost than two.
- *Sunk costs* are costs that, once made, cannot be recouped. The extent to which an investment is sunk cannot necessarily be ascertained at the time an investment is made. Nonetheless, from the point of view of a potential entrant, the more significant the amount of immovable, industry-specific investment required to establish operations, the higher the potential sunk costs if entry is unsuccessful, and the higher the risk of investment. Exit costs effectively become an entry barrier.
- *Economies of scope* exist if it is less costly for one firm to supply a number of products or services than it would be to have each service provided by a different firm. As with economies of scale, economies of scope can mean that it is more efficient to have only one supplier of the relevant products.

These factors may be neither necessary nor sufficient for natural monopoly. For instance, one firm may be able to produce at a lower cost than two or more, given market demand, even if constant returns to scale (average costs static as output increases) or diseconomies of scale (average costs increase as output increases) are present at the margin. Further, for a multi-product business, there could be diseconomies of scope in the production of several outputs — the costs of one firm supplying all products is greater than what it would cost for firms to specialise. This could offset the impact of economies of scale in the supply of the individual product or service.

Even the coexistence of economies of scale and scope does not necessarily imply the existence of natural monopoly (Baumol, Panzar and Willig 1982), since the concept of economies of scope does not consider the possibility of two firms producing different combinations of output. Nonetheless, an appropriate rule of thumb is that natural monopoly is more likely where fixed costs are large relative to marginal costs (implying high average costs compared with marginal costs) (King 2000).

Sources: Baumol, Panzar and Willig (1982); King (2000).

Airport costs and investments

On the supply side, natural monopoly is more likely, and hence potential barriers to entry more significant, the greater the requirement for large fixed investments and therefore the likely economies of scale, and the more significant are sunk costs or economies of scope.

The characteristics of investment and cost structures can differ significantly depending on the type of airport being considered. While some only need basic passenger facilities and unpaved runways, the discussion below considers the situation of airports, such as Australia's core-regulated airports, that are capable of servicing regular public transport (RPT) traffic in large jet aircraft.

Indivisibility of airport investment

Construction of a new airport requires the purchase of land and the development of facilities such as runways, aprons, terminals and processing facilities. To the extent that the costs of establishing facilities at new airports are higher than the cost of expansion at existing airports, this can create an advantage for an incumbent airport operator.

The most significant sources of indivisibility appear to be land and runways. The costs of procuring the large area of land required to build an airport can be very high, particularly in larger cities where vacant land close to population centres and amenities is scarce. This means that any new operator potentially would have to locate in a position that is less convenient than an existing operator, or else try to 'create' a large area of land by buying up smaller parcels from a number of current owners.[1] This latter option may lead to problems such as hold out by existing owners. Regulatory and environmental constraints also may create barriers.[2]

The construction of a runway also involves significant indivisible investment. If a prospective airport operator wants to build an airport capable of servicing jet aircraft, it must build at least two complete runways capable of handling such

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1 Technically, contiguous land is required for infrastructure, such as runways, taxiways, aprons and some form of passenger or cargo processing facilities. Due to changes in technology, however, some services, such as check-in, increasingly may be provided at off-airport locations (chapter 6).

2 Convenience may not necessarily be related directly to distance. A new airport 200 kilometres south of Madrid, for example, will be only about 50 minutes from the city on a new high-speed rail link (Starkie 2001a). Similarly, the Eastern Distributor in Sydney has made the airport 'closer' to the city by decreasing journey times, and City Link in Melbourne has decreased journey times between Melbourne Airport and some suburbs of Melbourne.

aircraft (to enable landing and take-off in all wind directions). A runway is indivisible in that it cannot be built for 'a few aircraft movements'. The costs of building a runway also are significant.

Other potential sources of indivisibility include terminal navigation and instrument landing systems and lights — a full set of which is required regardless of the number of RPT flights there are in a day or year.

The indivisibilities involved in constructing other necessary assets for a new airport, such as terminals and aprons, do not appear to be as significant. Although the capital expenditure involved may be substantial, these facilities can be designed to enable incremental expansion when (and if) traffic grows. According to the Motor Trades Association of Australia Superannuation Fund (MTAA Super Fund):

> Runways … come in very large increments. On the other hand, aprons, taxiways, terminals, car parks are a little less lumpy due to the modular design nature of modern airports and airports can plan to add on a few extra aerobridges, another baggage carousel and another acre of car parking every few years. (sub. 22, p. 33)

Where, for various historical reasons (often defence related), there already are a number of airports in a given location — such as in Melbourne which has, in addition to Melbourne Airport, Essendon, Avalon, Moorabbin and Point Cook airports — a potential airport competitor may not need to build a new airport. Instead, it might be possible to change the capability of an existing airport, say from a domestic to an international airport, enabling it to compete in a new market segment.

In this case, the supply-side barrier to entry depends on how extensive the existing facilities are. For instance, if upgrading the airport would require a significant expansion of airport land, then entry barriers will be higher. Similarly, barriers to entry would be higher if a new runway (to accommodate larger aircraft) is required. On the other hand, the main investment required might be new facilities, such as passenger processing and customs facilities, in which case the extent of indivisibility, and hence entry barrier, would not be as significant.

Economies of scale

Economies of scale (declining average costs as output increases) are more significant in industries with a relatively high proportion of fixed costs — costs that do not vary as output varies (in a given period). Economies of scale can create a barrier to entry because an incumbent supplier, especially one with excess capacity, can expand production at a lower unit cost than a potential entrant (unless the

potential entrant can capture a significant market share or increase the size of the total market (box 5.1)).

Airports often are said to have strong economies of scale, driven by large indivisible investments such as runways. However, although there are economies of scale in the provision of runways, there are likely to be diseconomies in other areas, such as terminal facilities (passenger handling) (Betancor and Rendeiro 1999; Walters 1978). Thus, the extent of scale economies in overall airport operations depends on which effect dominates. Difficulties in maintaining access between airside and landside facilities as airports expand also influence the overall degree of scale economies in airport operations (Starkie 2001b; Starkie and Thompson 1985).

Overall, economies of scale appear to be limited to airports with relatively low passenger numbers — some analysts claiming that falls in average costs are exploited fully at about 3 or 3.5 million passengers per annum (Doganis 1992; Salazar de la Cruz 1999).

Larger airports may encounter decreasing returns to scale. Salazar de la Cruz (1999), for instance, found that average costs may increase past 12.5 million passengers per annum (with constant returns between about 3.5 and 12.5 million passengers). This would imply that natural monopoly could exist beyond 12.5 million passengers since, at passenger numbers just beyond this, one airport would still have lower unit costs than two airports serving the same total market.

Although these results may not hold precisely for Australian airports (given differences in airport traffic and general economic and regulatory conditions), they are likely to be indicative of the situation in Australia.

The data on average expenses (excluding interest) presented in chapter 2 (figure 2.10) provide some, albeit tentative, support for this proposition. Of the core-regulated airports with international RPT services, smaller ones such as Darwin and Perth have higher average expenses than the larger international airports (Brisbane and Melbourne). Diseconomies of scale at higher passenger levels may explain partially the higher average expenses of Sydney compared with Brisbane and Melbourne. The lower average expenses of some of the smaller airports may reflect the lower costs of operating domestic, compared with international, airports.

Sunk costs

Sunk costs are investment costs that ‘produce a stream of benefits over a long horizon but can never be recouped’ (Tirole 1990, p. 308). Generally they relate to investments specific to a firm, industry or location — which means the assets either

cannot be moved, or cannot be sold to another party unless that party intends putting them to the same use, without substantial loss.

Sunk costs often are said to be significant for airports. For instance, the Board of Airline Representatives of Australia (BARA) commented:

> A number of the costs of investing in an airport are sunk once incurred. The costs of land development, runways and taxiways, aprons and so on are sunk once incurred … the size of the sunk costs are significant. (sub. 26, p. 9)

From the point of view of a potential investor in a new airport, the extent to which costs potentially could be sunk affects the risk of investment and willingness to undertake it. If an airport cannot generate sufficient traffic to be viable, then much of the airport-specific investment will not be recouped, and so indeed will be sunk. Thus, the more significant are the immovable airport-specific investments, the greater the risk. The costs of exit, then, effectively become the barrier to entry.

Most major airport investment, such as runways, taxiways, and apron facilities, is in immovable assets, so it cannot be sold for use in another location. As the Australian Council for Infrastructure Development noted:

> With an airport, which is a very, very big sunk cost investment, if the demand characteristics for your airport change, it's very hard to dig up the runway and take it somewhere else where it will be used. (trans., p. 288)

Some facilities at airports potentially may have alternative uses. Office space and some aspects of terminal facilities, for instance, could be used (if in a modified form) for general purposes. The development of business parks by some core-regulated airports (chapter 2) shows that, even though leaseholders must continue to operate airports on their land, some of the land does have alternative non-airport uses. Furthermore, recent speculation that Essendon Airport would be worth up to six times more as a residential development than as an airport (Davidson 2001) suggests that the opportunity cost of airport land (that is, its value in alternative uses) is not zero. (Appendix F discusses land valuation in detail.)

However, much airport investment is in airport-specific assets, which by definition cannot be put to alternative non-airport uses.

Economies of scope

Airports provide a number of services, both aeronautical and non-aeronautical (chapter 2). Economies of scope exist if it is less costly for one firm to provide a group of services than it would be to have each service provided by a different supplier.

In the case of airports, economies of scope appear to be most significant in the provision of aeronautical services. Economies of scope do not appear to derive from joint construction of aeronautical infrastructure, however — since, for instance, aprons can be expanded incrementally, even if no changes are made to runways. Instead, they derive from the lower coordination costs of having one supplier provide access to (or coordinate the use of) several aeronautical services at the airport — that is, runway, taxiway and apron. In addition, it may be difficult to attribute costs to specific aeronautical services.

Another possible source of aeronautical economies of scope may arise from the use of the same runway(s) by different traffic types — scheduled passenger, charter and freight services. Thus, for certain levels of overall demand, it may be less costly to have all traffic types use the same runway than to provide different facilities for each service.

There also may be economies of scope in the provision of multiple non-aeronautical services. Terminal buildings, for example, can be used for a number of purposes, from retail to office space. BARA noted:

> … there are economies of scope to the airport in providing many of these services. For example, there are economies in providing a full range of terminal services from retail space, office space and check-in areas. (sub. 26, p. 6)

These non-aeronautical economies of scope appear to derive from having one party — the airport — allocate a large terminal space to multiple uses (and the benefits to users of having a number of services in the one general area). This does not mean necessarily that there are benefits in having the airport directly operate all the services provided in the terminal. First, the airport operator may not have the expertise to operate each component (for example, different types of retail stores). Second, most non-aeronautical costs are likely to be attributable to particular uses, so it is feasible to have different parties operate individual services. According to the MTAA Super Fund:

> The costs of non-aeronautical outputs are distinct from, and more closely attributed to, particular services than aeronautical services costs. That is, their costs can be more clearly separately identified than are aeronautical services. (sub. 22, p. 33)

Finally, some participants commented that there are economies of scope in the joint provision of aeronautical and non-aeronautical services. The MTAA Super Fund, for instance, noted that airports have:

> … strong economies of scope due to the co-location of non-aeronautical services directly relevant to the demand for air travel (car parking and rental facilities) and of services less directly related (retail outlets and light industrial property) that are attracted by the passenger flows through the airport or the proximity of customers for

other services (catering for airlines, mechanical workshops for private aircraft). (sub. 22, p. 33)

Similarly BARA commented:

> … consumers and airlines demand a range of services from an airport and … it is less costly or simply impractical for more than one provider to provide individual elements of the package. (sub. 26, p. 6)

There may be some benefits on the supply side of having all these services provided by, or at least at, the airport. For instance, a large area of land is required to operate aeronautical services but only a portion of this land is required directly for aeronautical purposes. Some of it is needed simply to meet legislative requirements, such as safety or noise restrictions in residential areas. Hence, there may be cost savings from using the land more intensively — which can be done by expanding non-aeronautical uses. However, demand attributes, and consequent revenue benefits to airports, are likely to contribute more significantly to the benefits of the joint provision of aeronautical and non-aeronautical services.

Network benefits

The above discussion suggested that some aspects of the supply of airport services give airports natural monopoly characteristics.

However, as already noted, there are examples in Australia of more than one airport in a city (due to various historical factors), yet only one is used for domestic and international passenger traffic in each city. Avalon Airport, for instance, has some of the necessary aeronautical infrastructure in place (and reasonable access to the city) to compete with Melbourne Airport. Indeed, currently it is the designated alternative airport for B747 aircraft.

This indicates that supply characteristics are not the only factors that can make one airport dominant in a location. The overall level of demand obviously is another factor. However, the network benefits that accrue to airlines and their passengers from using one large facility appear to be particularly important. In effect, there are economies of scale on the demand side.

The benefits to airlines and passengers of using one airport accrue in a number of ways. By concentrating services at fewer airports, airlines can use larger (more economical) aircraft. Passengers transferring between flights benefit from not having to commute between airports in a city. Thus, the higher the degree of interconnecting traffic, the greater the preference for using one airport in a location.

Even without significant interconnecting traffic, a particular airline is likely to prefer operating out of one airport in a city. Spreading services across airports or moving out of a particular airport could involve significant costs, including sunk costs, for an airline. These costs would relate to infrastructure (including terminals), route development, repositioning aircraft, staffing and administration.

Thus, even with a choice of two similar (uncongested) airports serving the same destination, airlines are unlikely to spread services across both. Furthermore, they are unlikely to move to another airport in the area unless charges or congestion costs increased substantially.

In addition, the most efficient way to expand services or capacity, given network benefits, typically will be through expanding capacity or duplicating facilities at the existing airport. This, of course, is subject to land availability and environmental considerations. Thus network benefits create a more significant barrier to entry than airport supply characteristics alone.

The impact of regulation on barriers to entry

Airports in Australia must comply with a number of regulations, both general and airport-specific (chapter 3). Some of these regulations may form a barrier to entry, interacting with any barriers created by airport costs, investment, and network benefits.

Examples of the main potential regulatory barriers include:

- planning restrictions in, or near, large cities that may constrain the construction and design of a new airport, and inhibit the development of effective access to the site (through road or rail links, for instance);
- noise restrictions that limit the ability to locate an airport near residential areas, as well as influencing the amount of land airports require around aeronautical facilities; and
- environmental legislation — such as the *Airports (Environment Protection) Regulations 1976*, made under the Airports Act, that regulates airport activities that generate, or have the potential to generate, pollution or excessive noise (chapter 3).

Implications for market power

There are clear barriers to entry in the provision of airports. These arise from natural monopoly characteristics that are reinforced by regulatory constraints.

That there are natural monopoly elements in the supply of airport services, combined with preferences on the demand side to use one airport in a given location, makes it unlikely that a direct competitor RPT airport would emerge in any city in Australia, given passenger volumes in most airports.[3]

Considered in isolation, this would appear to give airports in Australia significant market power.

However, it is important to note that the essence of an airport's monopoly is spatial or locational in nature. A direct competitor may not emerge in the same city, but an airport in another city may provide some competition. The degree to which this type of competition could emerge can only be assessed by examining the demand characteristics of particular locations and airports. This is done in section 5.3.

5.3 Price elasticity of demand for an airport's services

The price elasticity of demand measures the responsiveness of demand to changes in the price of a good or service — formally, it refers to the percentage change in quantity that would result from a one per cent change in price. Where the percentage change in quantity is greater than one, demand is said to be elastic; where it is less than one, demand is inelastic. A firm facing inelastic demand can increase its revenue by increasing the price of its product.

Elasticities can provide an indication of the degree of market power a firm has. High demand elasticities for a firm's product reflect competition in a market. (A firm can face a high price elasticity for its product, even where demand at the industry level is relatively inelastic.) Firms facing low elasticities of demand for their product have market power since they can increase their price without significant substitution away from their product.[4]

3 As already noted, though there is more than one airport in a number of capital cities in Australia, this tends to be the result of historical accident. In any case, only one airport in each city is used for RPT traffic, despite the availability of the other airports.

4 That said, if a firm sets prices to exploit fully its market power, it will increase prices until the point where demand becomes elastic. Thus, the demand elasticity measured from a 'monopoly price' would give an erroneous indication of the degree of market power held. Further, if the demand of a firm (that is unregulated) is estimated to be price inelastic, this could imply that market power is not being fully exercised. Hence, it could suggest that there may be some constraint on the exercise of market power (assuming the elasticity is estimated correctly).

Framework for assessing the elasticity of demand for airport services

As noted in chapter 2, the demand for airport services is a derived demand; indeed it can be considered a 'derived derived' demand. It is derived from the demand for airline services which, in turn, is derived from the demand for business meetings, holidays, visiting friends and relatives (VFR), migration and cargo handling and so on.

The analysis here considers the demand for the services of a particular airport, which may be more elastic than the demand for airport services in general. The discussion focuses on passenger services since much of the freight passing through RPT airports is carried on passenger flights (chapter 2). Nonetheless, where appropriate, dedicated freight services (where freight is not carried in passenger aircraft) are discussed separately.

Since the demand for an airport's services is a derived demand, its elasticity will be influenced by four factors:

- the elasticity of demand for air travel to that destination;
- alternative sources of supply for a particular airport's services;
- the proportion of airfares (or freight charges) and airline costs that airport charges comprise; and
- the elasticity of supply of other input providers, such as airlines (box 5.2).

The focus with respect to airports generally is on the third factor — that is, the (low) proportion of airfares and airline costs that airport charges comprise on average (discussed below). The lower the proportion of costs that a particular input (such as airport services) comprises, the lower the elasticity of demand could be expected to be, all other things being equal (box 5.2).

However, to the extent that the elasticity of demand for the final product is high, or that substitutes for the input (in this case, airport services) exist, the elasticity of demand for the input will be higher. This does not mean necessarily that demand for airport services will be highly price elastic, but that it could be higher than would be suggested by its cost share alone.

In addition, there may be some elastic and inelastic segments in the market. The overall demand elasticity for the airport's services will be a composite of these different market segments, appropriately weighted. The question is which customers or segments drive the behaviour of the airport and its ability to increase prices or otherwise exercise market power. Further, estimated elasticities generally will be measured at a point on the demand curve. Less appears to be known about the shape

and/or slope of the demand curve for air travel. Elasticities could increase significantly as prices increase which could constrain scope for any large changes in airport prices.

Box 5.2 Conditions for assessing price elasticities of derived demands

Four conditions influence an assessment of the elasticity of a derived demand. Following Stigler (1969), the service for which there is a derived demand — as is the demand for airport services — is referred to as the productive service.

Elasticity of demand for the final product or service

The elasticity of demand for a productive service will be higher, the larger the elasticity of demand for the final product. In this case, any given increase in the cost of the input (and hence any given impact on final prices) will have a greater effect on final output.

Availability of alternative sources of supply of the service

The demand for a productive service is more elastic, the more easily other services may be substituted for it, that is, the higher the elasticity of substitution. The elasticity of substitution is defined formally as the percentage change in the ratio of two productive services consumed resulting from a percentage change in the relative prices of the services. Since an airport is essential to operate air services, the only possible substitute for an airport is another airport. Nonetheless, airlines may have some scope to vary the amount of airport services consumed by consolidating their services.

Proportion of total cost that the price of the productive service comprises

The lower the price of the service relative to the total cost of the final product (that is, the smaller the proportion of the total cost it comprises), the lower its price elasticity. Intuitively, few people are discouraged from buying a final product if the price of an input that is a small part of total costs increases (even if its price rises significantly and the cost is passed on fully). However, this factor can be overshadowed if there are significant alternative sources of supply for the input. Formally, for this condition to hold, the elasticity of demand must exceed the elasticity of substitution.

Elasticity of supply of other inputs

The demand for the productive service will be more elastic, the more elastic is the supply of other productive services. The maximum price that a particular input provider can receive (for a given level of production) is limited by the amount consumers are willing to pay for the final good, and the price other input providers require for their services. Thus, if the price charged by one input supplier increases, either the price of the final good must rise and/or other input suppliers must accept a lower price for their services. The lower the ability of other input providers to accept a lower price (because they have a high elasticity of supply, or operate under conditions of decreasing costs), the greater is the adjustment required by consumers (that is, the higher the change in the price and, hence, demand for the final product).

Source: Stigler (1969).

The rest of this chapter considers the importance of each factor in influencing the elasticity of demand for a particular airport's services. As for section 5.1, the approach adopted here is consistent with the framework outlined by Professor King (ACCC, sub. 36, attachment C), though its structure differs.

Elasticity of demand for air travel to a particular destination

The higher the elasticity of demand of air travel for a particular destination, the higher the likely elasticity of demand for a particular airport's services.

Reliable estimates of price elasticities for passenger air travel are difficult to obtain. As noted by Oum, Waters and Yong (1992), elasticities differ depending on fare class (for example business, economy, discount), as well as distance. Problems obtaining data, however, mean that only aggregate price elasticities tend to be estimated. Furthermore, calculated elasticities also tend to be based on some average estimated fare, rather than actual prices paid, further distorting estimates.

As a result of these problems, estimates vary widely, ranging from -0.4 to -4.51, with most falling between -0.8 and -2.0 (Oum, Waters and Yong 1992). Although these results are not unambiguous, the general conclusion seems to be that business travel is relatively inelastic, while holiday travel is elastic. Overall, though, BARA noted that 'available evidence suggests that demand for air travel is relatively elastic' (sub. 26, p. 11). This point was echoed by Qantas: 'Qantas believes that air services have a reasonably high price elasticity' (sub. 48, p. 18).

The price elasticity of demand for international air travel to Australia seems to follow broadly the patterns found in the international studies. According to the then Bureau of Transport and Communications Economics (BTCE 1995), foreign leisure travellers appeared to be more price sensitive than business travellers. The elasticities also varied depending on the country of origin of the travellers. The estimated price elasticities (between -0.23 and -1.19 for leisure travellers, and inelastic or zero price elasticity of demand for business travellers) tended to be towards the lower end of the range of elasticity estimates found in the other studies cited above.

The available elasticity estimates do not, however, indicate the potential price responsiveness of travellers to particular destinations in Australia and are of somewhat limited use in assessing the elasticity of demand for particular airports. Broadly speaking, the elasticity of demand for air travel to a particular destination will depend on the relative attractiveness of the destination and the relative attractiveness of air travel to that destination compared with other modes. The impact of these two factors will vary according to the market segment being served

(domestic or international; business or leisure), and whether the service is freight or passenger transport.

Demand substitution possibilities: alternative destinations for passenger travel

Since the demand for air travel is derived from the demand for business trips, holidays etc (chapter 2), several factors influence the decision to travel to a particular destination. These include the tourist attractions and amenities in a region, business opportunities, friends and relatives, and the cost of travel (including the cost of the journey and living costs while there).

The primary purpose for travel is likely to influence the relative importance of each factor and thus the extent to which travellers are willing to substitute one destination for another, or change the frequency of travel. In particular, holiday makers (both domestic and international) are more likely to have discretion over their destination than are those visiting friends and relatives or travelling for business purposes.[5] Gold Coast Airport commented:

> Competition can come in several ways for a leisure destination such as ours … the tourism market is reasonably fickle. (trans., p. 373)

Other regions within Australia and, in some cases, destinations overseas can be alternative destinations for Australian and international holiday travellers. As noted by the ACCC:

> … both international and domestic tourists might substitute *destination* on the basis of cost differences. For example, a tourist may decide to visit Coolangatta rather than Fiji, if the cost of doing so is substantially lower. (sub. 36, pp. 62–3)

In addition, even if international holiday travellers have made the decision to come to Australia, they have choices about which regions they visit within the country, and their points of arrival and departure.

Though often seen to be fairly inelastic market segments, there also are some substitution possibilities for travellers in other categories. For instance, people visiting friends and relatives may have little choice over destination but do have a choice about frequency (and possibly transport mode) and therefore may be quite price sensitive. Business travellers also may change the frequency of visits (or choose alternative modes, as discussed below). If business travellers ultimately are selling their products into competitive export markets, then they are likely to be more price sensitive.

5 Conference organisers have much more discretion over destination. Thus, this segment of the business market is likely to be more price elastic than the general business market.

The potential price responsiveness of travellers, both tourists and those visiting family and friends, was highlighted by Tourism Tasmania:

> … Tourism Tasmania's own TVS Special Fares Survey … covered the period in September and October 2000 when $55 fares were placed on Melbourne to Tasmanian ports as well as most other city pairs across the country. The survey showed that 34 per cent of the fares to Tasmania were purchased by visitors who had no plans in the next two years or more to visit Tasmania and that the primary reason for purchasing the tickets for 92 per cent was the price of the ticket. Visiting friends and relatives was the motivation of 53 per cent of those travellers, with the remainder being predominantly leisure focused. (sub. 13, p. 1)

Overall, although each market segment has some substitution possibilities, these possibilities are higher for holiday travellers. Therefore, destinations with a greater proportion of leisure traffic are likely to be more susceptible to competition from other destinations. On the other hand, the higher the proportion of business traffic, the less price sensitive travellers to a destination are likely to be (all other things being equal).

As can be seen in table 5.1, the proportion of interstate holiday travellers varies greatly across regions serviced by Australia's core-regulated airports.

In general, the eastern mainland states, as well as South Australia and Western Australia, have higher proportions of business and VFR travellers than the other destinations considered.[6] Also, there are differences in the main market segments going to different regions within these states. For instance, the proportion of business traffic in Brisbane is significantly higher than the Gold Coast and Tropical North Queensland. Likewise, there is more business traffic travelling to Sydney than the NSW average. Similarly, in the Northern Territory, a greater proportion of visitors to the 'Top End' go for business or VFR purposes than those going to the centre region (NTTC 2000).[7] It is likely that such patterns (that is, a lower proportion of leisure traffic in capital cities) would be repeated in the States for which the data are not available.

This suggests that substitution possibilities and hence demand elasticities to destinations such as Adelaide, Brisbane, Canberra, Melbourne, Perth and Sydney

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6 Note that because the data presented relate to overnight travellers (that is, travellers who do not arrive and depart within a day), the proportion of business travellers is understated.

7 NTTC (2000) provides data on the main purpose of visit of all visitors to the Northern Territory (not separated by domestic and international travellers), by region visited in 1999-00. Overall, of visitors to the 'Centre' region in 1999-00, 77 per cent went for holiday/leisure purposes and 7 per cent each for VFR and business purposes. Of visitors to the 'Top End', 55 per cent went for holiday/leisure purposes, 17 per cent for VFR, and 14 per cent for business purposes. The proportion of international visitors was higher for the 'Centre' than the 'Top End' region.

will be lower than the other destinations considered — unless business frequency is price elastic.

This conclusion effectively assumes that the mean elasticity (that is, an elasticity based on the main market segments served) is an appropriate measure of price sensitivity. If, however, most marginal travellers come from elastic market segments, an increase in prices will result in a larger quantity response than suggested by an unweighted average elasticity. That said, if these elastic portions are a very small part of the market, they are unlikely to affect the overall elasticity significantly.

Table 5.1 **Primary purpose of visit, interstate overnight visitors in Australia, 1999[a]**

Percentage of all interstate overnight travellers to the destination who go there for each purpose

Destination	*Business[b]*	*Visiting friends and relatives*	*Holiday/leisure*	*Other*
	%	%	%	%
New South Wales[c]	**20**	**32**	**43**	**6**
Sydney	33	34	28	6
Victoria	**34**	**30**	**34**	**4**
Queensland[d]	**22**	**30**	**45**	**3**
Brisbane	32	32	30	6
Gold Coast	11	24	62	3
Tropical North Qld	21	23	53	3
South Australia	**31**	**31**	**34**	**6**
Western Australia	**40**	**26**	**37**	**1**
Tasmania[e]	**18**	**22**	**56**	**4**
Northern Territory	**24**	**13**	**55**	**6**
ACT	**30**	**34**	**32**	**4**

a Overnight visitors are travellers aged 15 years and over who do not arrive and depart within the same day. Unless otherwise stated, the source is BTR (2000b). Rows of the table may add to more than 100 per cent because some people reported more than one purpose for their visit. **b** Business includes conferences. **c** NSW data are from Tourism New South Wales (2001) for 1999-00, and refer to domestic (intrastate and interstate) visitors. Main purpose of visit does not appear to differ significantly between domestic and interstate categories (though the proportion of business travel is higher for interstate visitors). **d** Queensland data are from Tourism Queensland (2000a–d), and refer to domestic (intrastate and interstate) visitors. Main purpose of visit does not appear to differ significantly between domestic and interstate categories. **e** Tasmanian data are from Tourism Tasmania (2001) for the year 2000.

Sources: BTR (2000b); Tourism Queensland (2000a–d); Tourism New South Wales (2001); Tourism Tasmania (2001).

International travellers primarily come to Australia for a holiday (table 5.2). The proportion of foreign business visitors tends to be low, with the highest levels around 14 per cent for Melbourne and 12 per cent for Sydney in 1999. Melbourne also had the highest proportion of international VFR visitors, followed by Sydney,

Brisbane and Canberra. Differences in the purpose of visit between destinations within a State do not appear to be significant. Overall, since holidaying is the dominant reason for international travellers visiting Australia, international travellers may be more price sensitive as a group than domestic travellers. However, the fact that international visitors to Australia have little choice but to fly may reduce their price elasticity of demand for air travel.

Table 5.2 **Primary purpose of visit, international visitors to Australia, 1999[a]**

Percentage of all international travellers to the destination who go there for each purpose

Destination	*Business*[b]	*Visiting friends and relatives*	*Holiday*	*Other*
	%	%	%	%
New South Wales	**12**	**16**	**59**	**13**
Sydney	12	15	59	13
Victoria	**13**	**20**	**52**	**14**
Melbourne	14	20	53	14
Queensland	**5**	**12**	**73**	**10**
Brisbane	9	16	62	14
Gold Coast	3	7	84	5
Tropical North Queensland	2	7	82	8
South Australia	**8**	**18**	**59**	**15**
Adelaide	7	18	61	13
Western Australia	**7**	**27**	**52**	**13**
Perth	8	26	53	13
Tasmania	**10**	**18**	**52**	**20**
Hobart	6	20	59	15
Northern Territory	**2**	**9**	**80**	**9**
Darwin	2	9	76	13
Alice Springs	2	8	81	9
ACT	**10**	**13**	**64**	**13**

a Includes only international travellers aged 15 years and over. These figures differ from those of the ACCC (sub. 36, p. 63). The ACCC data relate to inbound traffic on international flights at the respective airports. The data in this table are based on BTR (2000a), which is the result of surveys of visitors, conducted as they left from Australia's international airports. **b** Business includes conferences.

Source: BTR (2000a).

The importance of local population size and density

The importance of the local population in encouraging travel to (and from) a destination is highlighted by the importance of business and VFR travellers to some destinations. Where the local population is relatively large, it is more likely that

travel to the destination will comprise predominantly inelastic business and VFR travellers (for a given level of modal and airport substitution, of course). Thus, the Queensland Department of Tourism, Racing and Fair Trading argued:

> Sydney serves as a gateway to Australia's largest catchment area for high yielding premium fare paying passengers. Sydney also has geographic advantages in that it acts as a conduit to funnel traffic to and from Australia's densest population centre. The traffic volume, premium revenue mix of business and leisure traffic coupled with significantly greater frequency and volume of air services gives Sydney significant advantages over Brisbane in terms of obtaining favourable scale, scope and revenue efficiencies, for passenger air transport. (sub. 6, p. 2)

Demand substitution possibilities: alternative modes for passenger travel

People potentially can travel to a given destination in a number of ways — by bus, train, ferry, or car, as well as air (although air is almost the only way for international arrivals to travel to their first Australian destination). The potential for modal substitution should be considered broadly — for instance, advances in technology mean that teleconferencing provides a good alternative to some face-to-face business meetings.

The greater the attractiveness of modal substitutes to a particular destination, the higher will be the price elasticity of demand for air travel (and hence the higher the price elasticity of demand with respect to airport charges).

Factors that influence the substitutability of travel modes

Factors that influence the decision over mode include the proposed length of stay, the distance to be travelled, and the relative cost of each mode (both in financial terms and in terms of convenience and the time taken to travel). As with the possibility for destination substitution, the primary purpose for a visit is likely to influence the relative importance of each factor and thus the extent to which travellers are willing to substitute modes. Of course, the first decision to be made by potential travellers, regardless of the purpose of travel, is whether to go at all, or how often to go.

Several participants argued that the modal alternatives to air travel generally are weak, mainly due to time savings associated with air travel. The ACCC, for instance, noted the particular importance of time in determining preferences for business air travel:

> For business travellers the convenience of air travel is vastly superior to the alternatives. It is likely that for this customer group, location is primarily determined by factors other than airport pricing, and that time constraints are a critical element of the

> travel decision. In such circumstances, there are no viable substitutes to flying to a particular destination; the choice is simply between travelling and not travelling. (sub. 36, p. 62)

Though not travelling within a particular day is not always a viable alternative for business travellers, business will not be totally unresponsive to costs. It can minimise the use of air travel in various ways — for instance, by scheduling intercity meetings so that fewer trips are required, or teleconferencing. The latter is likely to grow in importance as technology improves and becomes more cost effective.

Virgin Blue argued that time also was an important factor for leisure travellers:

> … the time to travel between the major airline destinations is significantly longer by car, bus or train than by aircraft (12 hours compared to an hour and [a] half for example). … For leisure travellers, the current low fares compare favourably with other forms of transport, and any overnight stays relating to the time taken by other forms of transport contribute to the total cost of the holiday. Accordingly, other forms of passenger transport are not readily substitutable for aircraft travel. (sub. 30, p. 12)

Assessing the time taken to travel by air, however, should include the journey time from the initial departure point to the origin airport, as well as the time taken to travel between the destination airport and the final destination point. In the case of travel between Canberra and Sydney (and particularly southern Sydney), for instance, it may be more time effective (even for business travellers) to travel by car.

In any case, leisure travellers are likely to be far more sensitive to price than time, especially when compared to business travellers.

First, holidays tend to be longer than business trips so time may not be as critical for some holiday travellers. They may therefore place a greater emphasis on the generally higher direct cost of air travel.

Second, the journey to a final destination often can provide value to holiday travellers who visit attractions along the way. This means that the extra time taken to travel using modes other than air may not be viewed purely as a cost.

Finally, the use of a car when at the destination often is valued by holiday travellers. Thus, driving to a holiday destination might provide benefits to counteract the extra time taken to travel.

Nonetheless, the further the distance between destinations, the less attractive are alternative travel modes. The ACCC noted two reasons for this:

> Firstly, the difference in journey times between air transport and the alternatives increases rapidly. Secondly, the cost differential between air transport and any alternative mode of transport may narrow as the distance increases. (sub. 36, p. 63)

Data provided in BTR (2000b) and reproduced below (table 5.3) show that interstate overnight business travellers are far more likely to use air transport than are holiday/leisure or VFR travellers.

Table 5.3 **Transport used by overnight interstate visitors in Australia, by purpose of visit, 1999[a]**

Percentage of travellers going for each purpose that use each mode

	Holiday/leisure	*Visiting friends and relatives*	*Business*[b]	*Other*	*Total*
	%	%	%	%	%
Air	34	35	70	17	48
Private vehicle	58	60	26	72	52
Other	16	11	8	17	13

a Columns add to more than 100 per cent because some people reported more than one mode and purpose for visit. **b** Business includes conferences.

Source: BTR (2000b).

For international travel to Australia, there is little option but to fly. The only real choice about travel mode for international visitors is how to travel between various regions within the country.

Alternative travel modes to specific Australian destinations

Overall price elasticities of demand for air travel incorporate factors such as modal substitution. However, given the variety of factors influencing the choice of travel modes, the price sensitivity of travellers (attributable to modal substitution), is likely to differ across Australian cities.

Since holiday travellers are likely to be more price elastic than business travellers, one way to assess the potential competition air faces from other travel modes is by examining which market segments dominate travel to a particular region. Thus, using the information in tables 5.1 and 5.2 above, it would appear that air travel is likely to face more intermodal competition (and greater price elasticity of demand) in destinations such as the Northern Territory, Gold Coast and Tropical North Queensland, where holiday travellers dominate.

However, even for holiday travellers, the viability of modal substitutes is dependent on factors such as the distance between origin and destination. Thus, examining modal choice to particular destinations can give an idea of the perceived substitutability of travel modes (table 5. 4).

Table 5.4 **Mode of travel to Australian states by overnight interstate visitors, 1999[a]**

Percentage of total overnight interstate visitors to the state using each travel mode

Destination	*Air*	*Private vehicle*	*Other*
	%	%	%
New South Wales	32	59	10
Victoria	49	44	10
Queensland	55	41	11
South Australia	43	46	12
Western Australia	82	13	21
Tasmania[b]	78	na	22
NT[c]	53	37	9
ACT	20	71	9

a Overnight visitors are travellers aged 15 years and over who do not arrive and depart within the same day. Unless otherwise stated, the data source is BTR (2000b). Rows may add to more than 100 per cent because some people reported more than one mode. **b** Tasmanian data are from Tourism Tasmania (2001), and refer to the year 2000. **c** NT data are from NTTC (2000) for 1999-00. 'Private vehicle' for the Northern Territory includes 'other road transport' (this excludes coach, included in 'other' in this table). **na** Not applicable.

Sources: BTR (2000b); NTTC (2000); Tourism Tasmania (2001).

As illustrated in table 5.4, air travel comprised no more than around 30 per cent of interstate overnight trips taken to New South Wales and the ACT.

On a whole of State basis, air travel is the dominant mode only to Western Australia, Tasmania, and to a lesser extent, the Northern Territory and Queensland. However, as shown in box 5.3, the relative importance of air travel differs according to the region being considered in Queensland. In particular, the proportion of visitors travelling to Tropical North Queensland by air is higher than for Brisbane or the Gold Coast.

For Tasmania, however, sea often is seen to provide a viable alternative to air travel. The ACCC, for instance, argued that:

> … ferry services connecting Melbourne and northern Tasmania are an attractive alternative to flying (for many visitors). In this case the demand side substitution possibilities are much greater than for other capital city airports. (sub. 36, p. 64)

Further, as discussed below, competition between airports in Tasmania is likely to be more significant than in other destinations.

Box 5.3 Mode of arrival of visitors to selected Australian destinations

The tourist bureaux in some states publish breakdowns on mode of arrival, either by domestic and international visitors, or by regions within the states. Examples of these are provided below.

Northern Territory

In 1999-00, 65 per cent of all visitors to the Territory arrived by air, 24 per cent by private vehicle, 7 per cent by coach, and 4 per cent by rail. As shown in the table below, the relative proportions using each mode differed, sometimes significantly, between domestic and international travellers. In particular, a far greater proportion of domestic than international visitors travelled by private vehicle. The overall proportions appear to be similar for the 'Centre' and 'Top End' regions. (NTTC 2000)

Mode of entry	*Interstate visitors*	*International visitors*	*Total visitors*
	%	%	%
Air — domestic	52	59	56
Air — international	1	15	8
Coach	6	7	7
Private vehicle	37	9	24
Rail	2	6	4
Other	1	1	1

Queensland

In 1999, 71 per cent of domestic (including intrastate) visitors to Queensland travelled by private vehicle, 21 per cent by air and 4 per cent by rail (Tourism Queensland 2000c). The proportion of interstate visitors who travel by private vehicle is lower than for the domestic total. However, differences across regions are likely to be similar for interstate and intrastate travellers. Data for three regions are illustrated below (Tourism Queensland 2000a, b, d).

Mode of entry	*Brisbane*	*Gold Coast*	*Tropical North Queensland*
	%	%	%
Air	30	20	43
Private vehicle	58	69	47
Other[a]	12	11	10

[a] 'Other' includes rail (7 per cent) for Brisbane; bus/coach (5 per cent) for Gold Coast; and rented vehicle (5 per cent) for Tropical North Queensland.

Tasmania

Approximately 78 per cent of travellers to Tasmania arrived by air in 2000: 44 per cent arrived at Hobart Airport, 24.7 per cent at Launceston, 5.7 per cent at Devonport, and 3.1 per cent at Burnie (Wynyard). The remaining 22 per cent arrived by sea (most of those going to Devonport with TT-Line). (Tourism Tasmania 2001)

Sources: NTTC (2000); Tourism Queensland (2000a–d); Tourism Tasmania (2001).

In the case of the Northern Territory, the relative importance of air travel differs significantly between domestic and international tourists (box 5.3). A far greater proportion of domestic than of international visitors travelled to the Northern Territory by private vehicle.

Demand substitution for dedicated freight traffic

As with passenger traffic, demand substitution for dedicated freight services (that is, where freight is not carried in passenger aircraft) can be looked at in terms of destination and modal substitution. And, as with passenger traffic, the substitution possibilities are likely to differ between international and domestic freight.

For international freight, the only possible modal substitute is shipping. For the transport of domestic freight, on the other hand, road, rail or sea may be viable alternatives.

Not all freight is amenable to transport by air — shipping is the only viable alternative for some types of international cargo, for instance. However, the freight that is transported by air tends to be highly time-sensitive. As Virgin Blue noted:

> The means of freight transport is determined by the required delivery time and characteristics of the freight item. Air transport is higher cost than other forms of transport, reflecting its short delivery time. Highly time sensitive freight is typically only suitable for air transport. (sub. 30, p. 12)

Nonetheless, BARA noted:

> For some domestic overnight freight services road and rail might provide a viable alternative. (sub. 26, p. 7)

Apart from the time factor, the relative viability of other modes depends on the extent of infrastructure for other modes, as well as the location of production of the goods to be freighted. For instance, in Tasmania there are sea freight terminals at Hobart, Launceston and Burnie. In addition, it was noted by Hobart Airport (and supported by Launceston Airport (sub. 35)) that:

> … Tasmanian salmon producers use both sea and air transport. Our advice is that it costs $2 per case less to transport salmon by road-sea freight from Hobart to Melbourne, than by air. The other advantage of road-sea freight is that it is a seamless service from say the salmon factory at Dover in the south of Tasmania, across Bass Strait, to the markets of South Australia, Victoria and New South Wales. (sub. 11, p. 5)

Thus, although the substitutability of transport modes for freight is likely to be relatively low, substitution is possible.

The possibilities for destination substitution appear to be lower for freight than for passenger traffic. To the extent that domestic air freight is generally time-sensitive, it needs to be sent by relatively direct routes to a required destination.

In terms of destination substitution of international freight, excessive transport costs might mean that some goods that would otherwise be transported to (or from) Australia may be sent elsewhere (or kept within the country). To the extent that freight needs to be sent to Australia, the potential for destination substitution is limited to the substitution of ports within Australia. That is, freight could be sent to different airports within Australia, and then freighted by other means (such as road) within the country, depending on the relative costs of doing so. For instance, Melbourne and Sydney appear to be viable substitutes for Adelaide in some circumstances. A significant proportion of air freight generated in South Australia — high value and perishable freight — goes to Sydney and Melbourne (SA Government, sub. to PC (1998a)).

The extent to which alternative airports can compete for air freight (both international and domestic) is discussed below.

Alternative sources of supply for a particular airport's services

Given that a decision is made to travel (or send freight) to a particular destination, some form of airport service is required by airlines (and their users). Substitution possibilities for a particular airport's services may be available to airlines in terms of using larger planes or changing the frequency of landings to the airport. Nonetheless, the main potential source of input substitution appears to be the availability of a proximate airport. How close a particular airport must be to be considered proximate needs to be examined on a case-by-case basis.

Supply substitution possibilities for passenger traffic

For reasons discussed above (section 5.2), there is unlikely to be direct competition in a particular city from another airport for passenger traffic since the core-regulated airports are the only RPT airports in their city. Nonetheless, airports in nearby locations may be relatively good substitutes in some cases. To the extent that this is the case, the market power of these airports will be diminished.

Determining the potential substitutability of airports requires consideration of the geographic dimension of the market (section 5.1). What constitutes a proximate airport will differ according to the market segment being examined (business compared with holiday segments; domestic compared with international segments).

As noted with respect to modal substitution, although time may be important for holiday travellers, for many of them it may not be the primary consideration. Thus, domestic holiday makers are likely to have a more flexible view than business travellers of what constitutes a proximate airport. This suggests that airports in destinations with predominantly domestic holiday (or even VFR) travellers are likely to be more susceptible to competition from nearby airports.[8]

As discussed above, Tasmania, Gold Coast, Tropical North Queensland and the Northern Territory receive high proportions of holiday traffic. Of core-regulated airports serving these regions, it appears that Launceston, Hobart, Coolangatta and Alice Springs face effective competition from other 'nearby' airports.

Hobart and Launceston face a potentially high degree of competition from each other. They are just over two hours' drive apart, making them relatively close destinations for holiday — and even VFR — travellers, which are their main market segments. In addition, since most holiday makers to Tasmania visit more than one city in the state (Tourism Tasmania 2001), and many travel around Tasmania in cars, the particular point of arrival is less important than it might be in other states. Hobart and Launceston airports also face some potential competition for passenger traffic from Devonport Airport.

Coolangatta Airport faces competition from other airports in the southern Queensland region and northern New South Wales. One hundred kilometres south of Brisbane (and with a new rail link joining Brisbane and the Gold Coast), visitors to the Gold Coast have a viable option to go to Brisbane rather than Coolangatta. There are two indicators of the strength of this potential substitutability. First, even when no domestic new entrants flew there, it appeared that airfares to Coolangatta Airport fell when new entrants began flying to Brisbane. Second, airline webpages and brochures issued by the Gold Coast Tourism Bureau note Brisbane or Coolangatta airports as alternative ways of reaching the Gold Coast by air (Gold Coast Airport, trans., pp. 373–4).

The Qantas Airways and Ansett websites also suggest Coolangatta as an option for some flights to Brisbane (for example, Melbourne–Brisbane). Nonetheless, Brisbane does not appear to face significant reciprocal competition from Coolangatta Airport due to its scale, the extent of business traffic it has, and the fact that it has a much stronger ability to service international traffic.

8 As discussed below, airport charges are a small proportion of airfares. Nonetheless, at the margin, holiday travellers are likely to be more responsive to any price change. Further, to the extent that airlines respond to increased charges at one airport by decreasing frequency of service, this also may make another proximate airport more attractive to travellers, and encourage airport substitution.

The ACCC commented:

> … while Brisbane is geographically and functionally distinct from Coolangatta, the reverse does not apply. That is, Coolangatta faces competition from Brisbane, but Brisbane is not necessarily constrained in its pricing by the proximity of Coolangatta, given the capacity limitations at the latter. (sub. 36, p. 67)

In the Northern Territory, Alice Springs faces the most obvious competition from another airport. Many visitors to Alice Springs use the city as a starting point for their visit to outback areas like Uluru. The airport at Alice Springs faces significant competition for this segment of holiday makers from Yulara Airport, which is much closer to Uluru. Despite higher charges at Yulara (Northern Territory Airports, sub. 25), Yulara has experienced strong traffic growth since 1997, in contrast to Alice Springs.

Potential airport substitution for Darwin appears to be lower than for other NT airports such as Alice Springs. A higher proportion of visitors to Darwin than other areas of the Territory go for business and VFR purposes (although the majority still go for holidays). To the extent that these visitors travel by air, the relative isolation of Darwin means that other NT airports will not be sufficiently close to be considered proximate. If international tourists want to travel directly to the 'Top End', the potential for airport substitution also will be lower, although the fact that most international tourists to the Territory arrive on domestic flights (box 5.3) mitigates this somewhat. The main potential for airport substitution, then, is from holiday travellers who travel to more than one region within the Northern Territory.

It does not appear that the other core-regulated airports face strong competition from other airports for domestic passenger traffic. As discussed in section 5.2, although there is more than one airport in some of these cities, such as Melbourne, the preference of users for using one hub airport means that the others do not present significant competition.

For international passenger traffic, the ability to substitute points of arrival and departure within Australia potentially is more significant. In particular, there is potential substitutability of airports along the eastern seaboard. Melbourne Airport noted that:

> Whilst Melbourne Airport does not have any concrete evidence, our experience in dealing with travellers, airlines and tourist authorities suggests … international visitors tend to be indifferent to their place of arrival and destination but to prefer to arrive and depart from locations they wish to visit. (sub. 7, p. 10)

Further, it argued that it views its aeronautical market:

> … not just as Melbourne or Victoria but for international and long haul domestic services to encompass Tasmania, South Australia, the ACT and south New South

> Wales and potentially New Zealand and even Sydney for Europe and Asia. (sub. 7, p. 9)

On this basis, it has undertaken a survey to identify international segments that present growth opportunities (sub. 7). In addition, it noted that 'almost half the services added to Melbourne Airport since 1997 have been during times when Sydney Airport has been closed' (sub. 7, p. 12), that is, when the curfew prevents Sydney Airport from operating. This implies that the curfew at Sydney may have influenced whether some new routes to Australia went to Melbourne rather than Sydney. Though these decisions were driven by a legislative constraint, it also indicates an ability and willingness to substitute airports for some international services.

Nonetheless, Sydney tends to be the dominant point of arrival and departure for international visitors to Australia — over 45 per cent of international arrivals and departures go through Sydney, with about 20 per cent arriving or departing through Brisbane and about 15 per cent through Melbourne (BTR 2000a). According to the Queensland Department of Tourism, Racing and Fair Trading:

> Many of the Queensland destined passengers are now being routed via Sydney for reasons of airline economics and not travelling public desire. Sydney is therefore a 'close substitute' and dilutes Brisbane's opportunity to be 'sole supplier' of airport facilities or access. Although Brisbane receives a proportion of short haul international services, consolidation of the international services, particularly from South East Asia, via Sydney continues to transport a significant proportion of Queensland destination traffic. (sub. 6, p. 2)

Supply substitution possibilities for dedicated freight traffic

For dedicated freight (freight that is not carried in passenger aircraft), the potential substitutability of airports is likely to be greater than for passenger services.

In some cases, there is more than one airport capable of servicing freight traffic in a particular city. Therefore, potential competition can come from airports within a city, as well as from airports in another proximate city. For instance, in Melbourne, airports at Avalon, Essendon and Moorabbin all service freight traffic. Melbourne Airport noted:

> … as freight services require less intensive infrastructure than passenger services (freight terminals are simpler than passenger terminals, freight doesn't require food and beverage outlets or car parks and so on) secondary airports also provide competition. In the case of Melbourne Airport, Avalon provides services for long haul domestic and international freight operators whilst Essendon and Moorabbin can accommodate aircraft carrying small high value consignments (such as courier bags). (sub. 7, p. 16)

In other cases, such as in Tasmania, the proximity of airports in other cities can make it less costly (and not significantly more inconvenient) to transport goods between centres by road than by air. As well as indicating intermodal substitution possibilities, it suggests that the market power of any one airport is constrained by the potential for its business to be moved to the other centre by other modes. Hobart Airport commented:

> Due to the close proximity of Launceston to Hobart, intrastate and interstate domestic producers and manufacturers, and exporters, road freight their goods to Launceston Airport for transhipment by air, due to the cost impact of a 20-minute flight between Hobart and Launceston, compared to road freight costs. (sub. 11, p. 4)

What constitutes a proximate airport in the case of dedicated freight traffic, particularly international freight traffic, is likely to be different than for passenger traffic. For instance, as noted above, Melbourne and Sydney are viable substitutes for Adelaide in certain circumstances.

In addition, the network benefits that lead to a preference for using one airport for passenger traffic (section 5.2) are not as great in the case of freight in Australia. This gives airlines more scope to use more than one airport, or shift operations, for freight services. This seems to be the case particularly for international freight, where the most important issue often is to move cargo to (or from) Australia rather than to a particular city. Melbourne Airport submitted:

> Freight service operators seem to be quite willing to change airports, which is a reflection that their businesses are driven primarily by the task of delivering imports to Australia rather than to any particular location or the carriage of export freight from a specific location. This is because what really drives the provision of freight services is the known availability of high value cargo. It is this preparedness to move coupled with a general availability of airport capacity that gives airports little market power in relation to freight services. (sub. 7, pp. 15–16)

Relative importance of airport charges in total airfares and airline costs

The relative importance of airport charges in total airfares can provide an indication of the potential responsiveness of (prospective) passengers to changes in airport charges. The relative proportion of airport charges in airline costs, on the other hand, might give an indication of the degree to which airlines might be willing to substitute away from an airport's services in response to a change in airport charges. Each approach provides a different way of examining the potential price elasticity of demand for an airport's services.

The use of price discrimination (yield management) by airlines (discussed below) makes it difficult to ascertain the proportion of a particular fare that airport charges comprise. The proportion of the fixed costs of operations (including landing charges) that airlines allocate to each customer segment differs. Thus, any estimate of the cost share of airport charges can only be based on an average fare. Applying the average charge to highest fares, for example, may underestimate the real cost share of airport charges in that fare. Likewise, applying the average airport charge to the lowest fare may overestimate the cost share of airport charges in that fare.

On average, airport charges tend to be a small proportion of total airfares. The exact proportion depends on the airport being considered (since charges vary across airports), as well as the particular airfare in question. This in turn depends on the route, carrier and other conditions attached to the ticket, such as discounts for advance purchase.

For domestic passengers, participants suggested that airport charges comprise 2 to 3 per cent of the average airfare (MTAA Super Fund, sub. 22), while on particular routes this can be lower. For instance, on the Sydney–Melbourne route (the busiest route in Australia), airport charges comprise less than 1 per cent of the total full economy airfare (Hastings Funds Management, sub. 19),[9] and are less than 0.8 per cent of a Canberra–Brisbane full fare (Capital Airport Group, sub. 32).

However, these figures need to be interpreted carefully. In particular, because Ansett and Qantas have leases over their terminals (chapter 2), they pay for their leases, which are not treated as direct airport charges, but incur no other domestic terminal charges. The absolute level of charges — comprising both landing and terminal charges — will be higher for new entrant airlines, who do not operate their own terminals. Combined with their generally lower airfares, airport charges are likely to comprise a more significant proportion of new entrant airfares.[10] Thus,

9 This calculation was based on charges in place before the increase in charges at Sydney Airport that was vetted by the ACCC.

10 For example, the minimum (marginal) cost per passenger incurred by Virgin Blue is the terminal charge. Terminal charges actually paid by Virgin Blue are difficult to ascertain — for instance because rebates may be provided, offsetting notional terminal charges levied. For illustrative purposes, assume terminal charges of $1.65 per passenger (at each end), as vetted by the ACCC for the multi-user domestic terminal at Melbourne Airport. In this case, terminal charges would comprise just over 1 per cent of Virgin Blue's highest full airfare on the Adelaide–Brisbane route (as advertised on its website on 8 August 2001), and up to about 4 per cent of its lowest airfare on the Sydney–Melbourne route. The cost for the 'average' passenger would include this amount plus a proportion of landing charges. A B737 (as used by Virgin Blue) at typical load factors has around 1.5 passengers per tonne (MTAA Super Fund, sub. 22). Given this and the runway charges reported in chapter 2, runway charges per passenger on the Adelaide–Brisbane route would be about $6.68 (in total, return); and on the Sydney–Melbourne route (after the increase in charges at Sydney vetted by the ACCC) about

although charges are not likely to be a high proportion of full economy domestic airfares, they are likely to be more significant for low fare carriers.

For international passengers, charges at Australian airports are an even smaller percentage of the total airfare. Though in absolute terms charges are higher (since, for instance, international operators also incur terminal charges), airfares also are higher. The net effect is that airport charges levied by Australian airports comprise less than 1 per cent of the total average international airfare (MTAA Super Fund, sub. 22).

Aeronautical charges also are a relatively small component of airline costs, comprising about 4 per cent on average (Melbourne Airport, subs. 7, 37; Hastings Funds Management, sub. 19; Westralia Airports Corporation, sub. 21).[11] Again, however, the situation is likely to be different for new entrants, which tend to have lower per seat cost structures (see footnote 10). As Virgin Blue noted:

> Airport charges constitute a significant component of the variable costs per passenger and are therefore critical to the success of a low fare operator. They are likely to be significantly less important to a traditional high cost airline. (sub. 30, p. 8)

Of itself, the fact that airport charges comprise a relatively low proportion of airline costs[12] and airfares suggests that the price elasticity of demand for aeronautical services could be relatively low.

However, as noted above, new entrant airlines are likely to be far more price sensitive than the more established domestic airlines. As a consequence, Melbourne Airport commented:

> … an airport that increases its prices is more likely to lose new entrant volume and, indeed, if an airport is too aggressive with respect to its prices, new entrants may bypass it much in the same way that international carriers can … The decision that airports then face is whether to drop price or not to gain business. (sub. 7, p. 14)

$12.22 per passenger (in total, return). For the average customer on these routes, these estimates suggest that airport charges (incorporating terminal and runway charges) could comprise a little over 3 and 12 per cent of these fares respectively.

11 Charges levied directly by airports in Australia (that is, airport charges) are only one component of aeronautical charges. Other aeronautical charges incurred by airlines, such as terminal navigation and rescue service charges — which are levied in Australia by Airservices Australia, not airports — may be levied by airports in other countries. In addition, as already noted, airports do not levy domestic terminal charges on Ansett or Qantas. Thus, this figure, based on international estimates, may overstate the proportion of airport charges in the costs of the domestic operations of airlines in Australia.

12 Though this appears to be low, Ansett (sub. 42) noted that an individual input is considered to be high cost if its total cost represents more than 1 per cent of an organisation's total costs.

Further, as noted in box 5.2, the relative importance of this factor also depends on the substitution possibilities available to consumers and airlines (discussed above).

Supply functions of other input providers

As noted in box 5.2, the maximum price that a particular input provider can receive (for a given level of production) is limited by the amount consumers are willing to pay for the final good, and the price other input providers require for their services. Thus, an increase in the price of one input requires an increase in the price of the final good and/or a lower price being accepted by other input providers. The lower the ability of other input suppliers to accept a lower price, the greater the required increase in the price of the final good, and hence, the greater the fall in quantity demanded.

In other words, the elasticity of demand for airport services will be influenced to some extent by the elasticity of supply of airline services and other input suppliers to air travel, such as Airservices Australia (ASA). The Commission has been unable to find literature discussing the interrelationship between airport pricing and the cost structures of other input suppliers. Therefore, the discussion in this section is tentative. Nonetheless, the pricing decision of one input supplier (such as an airport) will tend to induce a supply and/or price response from other input suppliers. This section briefly examines airline cost and pricing structures, and the charges of ASA.

Airline costs and pricing

Broadly speaking, it appears that airlines have decreasing costs, though driven by economies of scope, networks and density, rather than economies of scale *per se*. Button and Stough noted:

> … the evidence indicates that within any city pair markets there are rapidly declining costs of service but that there are approximately constant returns to scale for airline systems that have reached the size of the US trunk carriers. Savings come from attracting more traffic rather than expanding the network to cover additional origin/destinations; any additional routes increase the operator's quasi-fixed costs which may negate the benefits derived from more traffic. (Button and Stough 2000, p. 22)

It also appears that the cost of carrying an extra passenger on a flight is minimal (OECD 2000), assuming there is spare capacity.

To the extent that airlines have decreasing costs, the ability of airports to increase profits by increasing their charges may be constrained. If the consumption of air travel falls in response to an increase in airport charges, the unit costs of airlines

also increase, exacerbating the effect on price (and hence quantity consumed) of air travel.

Further, it appears that price discrimination by airlines (charging different prices to different users with a different willingness to pay) is pervasive and increasingly sophisticated. The Network Economics Consulting Group argued that, although airlines are limited in their ability to price discriminate, there is likely to be 'a considerable amount of price discrimination in airline services' (NECG 2000a, p. 3). And, according to the MTAA Super Fund:

> Business class and full economy fares cover much of the fixed costs of airline operations, with discount leisure fares covering marginal costs and only a small contribution to fixed costs … the airline faces separable demand for capacity on each flight and sets prices to raise revenue in the most efficient manner. Airlines recover proportionally more from the relatively more price-inelastic demands. (sub. 22, p. 31)

To the extent that price discrimination is needed to cover the fixed costs of airlines, the ability of airports to increase charges (or impose other costs on airlines) may be constrained somewhat. Though this inquiry has not assessed evidence on this matter, observation suggests that airlines in Australia these days operate in a competitive environment and do not appear to be earning returns greater than other competitive parts of the economy. Thus, the price discrimination undertaken by airlines may indeed be necessary to cover their fixed costs.

Airservices Australia

The other major input supplier to air travel is ASA, the government-owned commercial authority that levies charges such as those for terminal navigation, rescue services and firefighting services (chapter 2).

ASA charges tend to be significantly higher than the charges levied by airports and, because of the way the charges are calculated, they are particularly high at smaller airports (chapter 2). Hobart Airport highlighted the relative importance of these charges for airports like Hobart, and the potential impact this has on the decision of airlines to fly there:

> Our charge at present with the old fee structure, if you say there was an average fare of four hundred and something dollars return Melbourne to Hobart … that is one seat basically … The Airservices charges add another three seats because they are three times dearer than we are, so there's four seats they have lost. I don't know whether the airlines think like that, to be honest, but that's the way I have been calculating it myself. (trans., p. 329)

ASA determines whether the services for which they charge are provided, so neither airports nor airlines have discretion about whether they are provided at a particular

airport. In addition, the fact that ASA charges are based on projected passenger throughput in a period means they are effectively fixed charges for that period. Therefore, any increase in charges (or other costs) imposed by an airport that leads to a fall in passenger throughput (below the projected levels) also leads to an increase in the average ASA charge for air travel to the airport.

This suggests that airport operators, particularly at smaller airports, may be restrained somewhat in their pricing decisions by the fixed quantum of ASA charges.

Implications for market power of particular airports

Generally it is suggested that the elasticity of demand for airport services is very low, mainly because airport charges comprise a relatively small proportion of airline costs and airfares. When combined with natural monopoly characteristics in the provision of airports, this is seen to give airports a significant degree of market power.

The above analysis suggests that factors other than the proportion of airport charges in average airfares or airline costs can be important in determining the elasticity of demand. The potential for destination, modal and airport substitution has ramifications for the potential market power of particular airports.

Since barriers to entry are likely to be of similar relevance to all RPT airports (section 5.2), factors that influence the elasticity of demand for a particular airport's services are likely to dominate the extent to which market power differs across airports. A summary of the Commission's assessment of these demand factors in relation to each of the core-regulated airports is provided in table 5.5, and elaborated on in appendix D. (The elasticity of supply of other input providers is not explicitly accounted for in this table.)

From this analysis, it appears that Alice Springs, Coolangatta, Hobart, Launceston, and Townsville are airports likely to possess least market power.

- They all serve predominantly tourist markets that face a high degree of destination substitution.
- Though all these airports are the only RPT airports in their respective cities, Alice Springs, Coolangatta, Hobart and Launceston appear to face effective competition from airports in proximate locations:
  - Alice Springs from Yulara;
  - Coolangatta from Brisbane; and

- Hobart and Launceston from each other.

- Potential competition from other airports does not appear to be significant for Townsville. However, there appear to be some modal substitution possibilities. As noted earlier, this does not imply necessarily that the elasticity is high at the margin. Nonetheless, the fact that it is predominantly a tourist market suggests that market power would be relatively low.

Table 5.5 **Summary of demand and competition characteristics of core-regulated airports for domestic passenger traffic**

Airport	*Main market segment to destination for interstate travel*	*Potential for destination substitution*	*Potential for modal substitution*	*Potential for airport substitution*
Adelaide	Business/VFR	Low	Moderate	Low
Alice Springs	Holiday	High	Moderate	High
Brisbane	Business/VFR	Low	Moderate	Low
Canberra	Business/VFR	Low	High	Low
Coolangatta	Holiday	High	Moderate/High	High
Darwin	Holiday	High	Moderate	Low
Hobart	Holiday	High	Moderate	High
Launceston	Holiday	High	Moderate	High
Melbourne	Business/VFR	Low	Moderate	Low
Perth	Business/VFR	Low	Low	Low
Sydney	Business/VFR	Low	Moderate	Low
Townsville	Holiday	High	Moderate	Low

It generally was agreed by participants — including the ACCC (sub. 36), but not some airlines who felt that all airports potentially have significant market power — that these airports did not have significant market power. In addition, no evidence of abuse, or attempts of abuse, of market power by these airports has been provided by participants though, of course, currently they are subject to price regulation.

On the other hand, it appears that Brisbane, Melbourne, Perth and Sydney airports possess significant market power. In terms of the eastern capital cities:

- They have high proportions of business and VFR travellers, who tend to have more price inelastic (and time-sensitive) demands. Business travellers also tend to be more significant users of air travel than other groups (table 5.3).

  - Nonetheless, a fairly high proportion of interstate visitors to eastern states travel by modes other than air (table 5.4), indicating that modal competition is strong for at least some market segments.

- They do not appear to face significant competition for domestic passenger traffic from other airports.

- Their status as the main international ports of arrival and departure in the country may add to their potential market power (and leverage) in the domestic market. Competition among these airports for international traffic may decrease, though not eliminate, this effect.

With respect to Perth Airport, the isolation of Perth (and the fact that most visitors go there for business or VFR) is a significant source of its market power. This is highlighted by the fact that a very high proportion of visitors arrives by plane (table 5.4). Westralia Airports Corporation itself accepted that, on the basis of the high barriers to entry and limited modal substitutes to Perth, it:

> … possesses market power in the provision of aeronautical services, but is strongly of the view that it does not abuse this market power. (sub. 21, p. 30)

Most participants agreed that, of all the core-regulated airports, Brisbane, Melbourne, Perth and Sydney have most market power. The Queensland Department of Tourism, Racing and Fair Trading (sub. 6) argued, however, that Sydney and Melbourne had more market power than Brisbane Airport.

In general, any claims of abuse of market power for these airports have related to specific services. These issues are addressed in chapter 6. Sydney Airport has, however, been accused of a more general abuse of market power in relation to its pricing proposal, and in particular, the size of the proposed increase in its charges. Of itself, however, the magnitude of the increase does not indicate an abuse of market power. Indeed, it is not clear that increases of those magnitudes were excessive given excess demand at Sydney Airport during particular periods of the day (chapter 8).

The degree of market power held by Adelaide, Canberra and Darwin airports is less clear. The ACCC (sub. 36) submitted that all three possess sufficient market power to warrant continued regulation.

Darwin is the major air entry point for the Northern Territory (NTTC 2000), and the only direct port of arrival to the Territory for international travellers. It also is relatively isolated. Nonetheless, although it has a higher proportion of business and VFR travellers than other NT regions, its dominant market segment is holiday travel. Thus, it would seem to face a potentially significant degree of destination substitution. In addition, most international travellers who arrive in (and leave) the Northern Territory by air do so on domestic flights. This decreases any market power that might otherwise accrue to Darwin through its ability to service international traffic. On balance, it does not appear that Darwin Airport has significant market power, although it is likely to be more significant than Alice Springs.

Both Adelaide and Canberra have significant proportions of business and VFR travellers. They also do not face significant potential for airport substitution. Nonetheless, they, and some others such as Melbourne Airport (trans., p. 177), have suggested that Canberra and Adelaide airports do not hold significant market power.

Adelaide Airport, for instance, argued:

> … we're not actually a strategic hub base for at least one national carrier, nor is our city a major economic or cultural capital for our nation here in Australia. Adelaide is very much of secondary importance to our largest customer groups. These are very important drivers of market power in our perception. (trans., p. 181)

With regard to Canberra Airport, a large proportion of visitors to Canberra arrive in private vehicles (table 5.4). This may reflect the high proportion of Sydney–Canberra traffic in the total arrivals in Canberra. As already noted, on this route, the distance between origin and destination is such that driving may be less time-consuming than flying (taking into account travel time to and from the airports at both ends). Thus, even some business travellers may find this a close substitute for air travel.

On balance, although the market power of Canberra and Adelaide airports does not appear to be as significant as Brisbane, Melbourne, Perth or Sydney, both airports appear to have a moderate degree of market power.

DRAFT FINDING 5.1

Of the core-regulated airports, Sydney, Melbourne, Brisbane and Perth have most market power. Canberra, Adelaide and Darwin are likely to have a moderate degree of market power. Core-regulated airports that do not appear to have significant market power (due mainly — except for Townsville — to the scope for effective inter-airport competition) are: Alice Springs, Townsville, Launceston, Hobart and Coolangatta.

Market power of non-core-regulated airports

The focus of the above discussion has been on market power at core-regulated airports. However, a number of participants discussed market power in relation to other airports — mainly with reference to regional airports in general, though some airports (such as Cairns and Yulara) have been discussed specifically.

Given the number of non-core-regulated airports that cater for RPT traffic in Australia, this section will focus on general issues relating to regional airports. Some particular cases mentioned by participants (Cairns and Yulara) are treated separately.

Market power and non-core-regulated regional airports

Regional airports in Australia are not a homogeneous group: a relatively small number service RPT traffic, with most catering for general aviation movements only (chapter 2). Facilities provided at these airports also differ widely, ranging from little more than an airstrip to having international terminal facilities.

Despite these differences, it is possible to make some general comments about the potential market power of regional airports. Some factors might imply the existence of market power.

- It is unlikely that there would be more than one airport in any particular regional centre. Although capital investment requirements at regional airports are significantly lower than for airports in the major capital cities, the potential traffic volume through the airport is in most cases unlikely to be high. There also may be issues of obtaining approval to construct a new airport.
- Most remote locations are dependent on air transport. As Australian Airports (Townsville) noted in the case of Mount Isa: 'We're talking about a community of 19 000 people. It relies on the airport as basically its only means of quick communication' (trans., p. 7).

However, a number of factors may mitigate the extent and exercise of market power by regional airports. The importance of air transport to many regional communities means that the community is likely to take a great interest in the decisions of the airport and try to exert its collective influence over those decisions. Australian Airports (Townsville) noted:

> The local community also plays a major role in terms of market power restraint of airports. The community has expectations and subsequent demands as to the level and quality of services to be provided by the airport as well as the fee that they are willing to pay for these. The community is able to exert pressure on the airport operator to ensure that service levels are appropriate and that prices are at a level that supports economic goals and development within the region the airport serves. (sub. 14, p. 10)

In addition, with some exceptions, regional airports do not tend to be critical to the overall operations of airlines — so competitive pressures are unlikely to compel airlines to fly to many of these airports. In this situation, it is not clear that it is the airports that have the market power. As noted by the Department of Industry, Science and Resources:

> Airlines can more easily reduce services at smaller regional airports but the commercial risks of sacrificing access at major city airports would be much higher. (sub. 40, p. 3)

Further, the larger regional airports (including some regional core-regulated airports) tend to serve predominantly tourist traffic. As noted above, this market

segment is likely to be more price sensitive than other market segments, decreasing somewhat the market power of airports in these locations.

Finally, many general aviation and regional airports in Australia are local government-owned (chapter 2). Therefore, the users and (direct or indirect) beneficiaries of the airport's services are the residents who also indirectly own and operate the airport through their elected council representatives. Given the importance of the local airport in many regional communities, and since the impacts of airport policy are relatively localised, discipline on the airport operator — the council — to represent the best interests of users could be provided through the electoral process.

Nonetheless, some participants have expressed concern about abuses of market power at regional airports. The Western Australian Government, for instance, commented:

> We are concerned that some airports … are using their monopoly position to maintain and increase charges. We are aware, certainly from the airlines and other sectors of the industry, there is little consultation when this takes place. We do have examples in Western Australia where … key infrastructure has gone in ahead of time, as to when it was needed. (trans., p. 389)

Concerns also have been raised about the extent to which councils use airport charges to fund general community projects rather than aeronautical uses. Again the Western Australian Government stated:

> An area of concern to us — as has been shown in other parts of Australia — is that airport revenue is being used to fund non-airport related plant and infrastructure. (trans., p. 389)

Anecdotal evidence suggests that charges at regional airports vary significantly. No charges are imposed at some regional airports, while at others charges can be very high. Ansett suggested that 'a lot of the regional ports have exceptionally high charges' (trans., p. 125). Of themselves, high charges do not necessarily indicate an abuse of market power. The small traffic volumes of most regional airports suggest that efficient unit costs may be high.

Given the ownership structure of most regional airports, the variation in charges also reflects local government objectives, which Professor Forsyth noted can be diverse:

> Some local government owned firms may indulge in monument building. On the other hand, a local government owner may use its airport to attract visitors to the region; if this is the objective, it will induce the airport to keep costs low and to keep prices in line with costs. It is also possible that some local governments will require their airports

> to maximise profits, so that they can use these to cross subsidise land rates. (sub. 5, p. 17)

However, if the airport policy of regional councils does not reflect local community wishes, then this arguably is more properly a local governance issue, not a market power issue to be addressed by the national economic regulation of regional airports.

Objectives other than the exploitation of market power also may explain seemingly high charges at airports located at resorts, for instance. Scott-Bloxam (sub. 2) submitted that landing charges at Lizard Island were 'astronomically high'. Although acknowledging that the maintenance of the sealed strip would be substantial, he added: 'I fail to see where a 3 seat Cessna 172 or 5 seat Cessna 206 can attract such high fees other than to discourage their visit' (sub. 2, p. 1).

If landing charges reflect the high costs of the strip, an objective to keep visitor numbers low to cater for a particular market segment, or environmental objectives, then it is not clear that this constitutes an abuse of market power. Further, although resorts are differentiated from each other, potential visitors have a variety of resorts to choose from. Thus, the resort market can be seen as competitive. In this case, the overall pricing behaviour of a particular resort, including the charges of its airport (an input to the resort product), would be constrained somewhat by competition among resorts.

Market power and Cairns Airport

Being a regional airport, much of the general discussion above is relevant to Cairns. However, Cairns has unique characteristics that warrant further discussion. In addition, Ansett and BARA have pointed to issues in their dealings with Cairns that, they argued, have resulted from its market power. These issues relate to the level of charges, efficiency and degree of consultation. On the other hand, Australian Airports (Townsville) (sub. 14) argued that it did not believe that unregulated Queensland airports, including Cairns, had abused market power.

Cairns potentially may have more market power than most other regional airports. It is the sixth largest RPT airport in the country in terms of passenger movements (larger than many core-regulated airports (chapter 2)), and is a designated international airport, suggesting that it has a significant demand base. Indeed, Australian Airports (Townsville) noted that Cairns is relatively attractive as a tourist destination when compared to Townsville, for instance, 'which is not as well developed as a tourist attraction' (sub. 14, p. 14).

The relative popularity of Cairns as a tourist attraction may give it an advantage over other destinations and mean that it is a more important part of airline operations than some other regional airports. Nonetheless, like any primarily tourist-based destination, it is relatively vulnerable to competition from other destinations. The recent withdrawal of a number of international services from Cairns highlights this vulnerability and, according to Gold Coast Airport, reflects that 'a full-service airline finds it difficult to make money on a tourism route' (trans., p. 378). In addition, the airport faces some competition from other modes (box 5.3).

In this situation, the market power of Cairns does not appear to be significant. As noted by the Department of Industry, Science and Resources:

> Airports which primarily service seasonal tourist destinations such as Cairns and Maroochydore have the least amount of market power. (sub. 40, p. 3)

Given this, to the extent that charges are higher at Cairns than other airports, they appear unlikely to reflect an abuse of market power. Since Ansett and Qantas incur domestic terminal charges at Cairns, which they do not incur at the core-regulated airports where they provide these services themselves, the charges at Cairns could be expected to be higher than those at core-regulated airports.

Further, the Commission understands that aeronautical charges at Cairns Airport (exclusive of GST) have not increased since new charges were negotiated in 1990 (although some new charges, relating to Government-mandated security requirements, for instance, have been introduced). Including GST, current domestic landing charges are $3.84 per tonne (based on maximum take-off weight (MTOW), which is lower than the core-regulated airports (chapter 2)), and domestic terminal charges are $3.84 per passenger. Though terminal charges are higher than those for some common-user terminals, a more relevant comparison may be the per passenger costs of the domestic terminals operated by Ansett and Qantas. However, the Commission does not have these data.

Market power and Yulara (Ayers Rock) Airport

Ansett cited its recent experiences with Yulara airport as an example of the fact that 'smaller non-regulated airports are also not averse to exercising their market power' (sub. 42, p. 27).

However, it is not clear that Yulara Airport has significant market power.

- It may have an advantage as a tourist destination. However, it competes for visitors with other 'unique' destinations.

- The airport is owned and managed by the owners of the Yulara Resort. It is thus part of an integrated resort operation. Managers may seek to make profits from the operation as a whole. However, it is likely that this would be done by attracting visitors to the resort (subject to capacity constraints). In addition, as noted above, the resort market can be seen as competitive. Competition would tend to constrain somewhat the pricing of a particular resort, including the charges of its airport (an input to the resort product).
- The costs of establishing and running an airport in that location are likely to be very high, especially given the runway requirements for jet aircraft and comparatively small volumes of planes and passengers.
- To the extent that there is a type of locational rent associated with its location, this would have been captured by the owner of the site when the lease was purchased.

6 Market power in particular airport services

In addressing the requirement of the terms of reference that 'future prices regulation should be applied to those aeronautical services and those airports where airport operators have most potential to abuse market power', chapter 5 examined potential market power of particular airports in Australia. This chapter considers the extent of an airport's market power in particular services provided at airports.

6.1 Introduction

It was found in chapter 5 that Sydney, Melbourne, Brisbane and Perth are likely to have the most significant degree of market power of Australia's core-regulated airports, followed by Adelaide, Canberra and Darwin, which appear to have a moderate degree of market power. The others — Townsville, Alice Springs, Hobart, Launceston and Coolangatta — possess little, if any, market power.

The market power of an airport depends on its market power in providing particular airport services. Although an airport that has market power in the overall market for airport services must have market power in some of the individual services, this does not mean necessarily that it has market power in all services provided at the airport.

The extent to which it is meaningful (from a regulatory perspective) to distinguish market power by service depends partly on the degree to which airport users, having made a decision to use an airport, have discretion over the consumption of particular services. The Board of Airline Representatives of Australia (BARA) noted:

> … airports compete in a cluster market for the supply of a range of services required by airport users and particularly airlines. As a result, the airport's market power extends across the package of services provided … As these services are purchased as a package, constraining the price of one of the elements will simply result in a higher price for one or more of the other elements. In order to address the market power (and associated efficiency loss) the regulation must encompass the package … (sub. 26, pp. 13–14)

The ACCC also noted the importance of considering non-discretionary bundles of services, but added that:

> Determining the services which should be included in the cluster of 'airport services' … rests primarily on an assessment of the scope for supply side substitution. (sub. 36, p. 78)

The assessment of market power undertaken here takes both these issues into account.

In addition, in assessing any evidence of (the use of) market power in particular airport services, it is important to distinguish between 'monopoly profits' on the one hand and 'locational rents' on the other. The former are profits in excess of the rates of return required to maintain supply of the good or service. The latter are returns accruing to a scarce factor rather than market power as such. To the extent that profits reflect locational rather than monopoly rents, they do not generate an efficiency loss (appendix C), but rather reflect the value placed on scarce resources by consumers and provide signals for the efficient use of these resources.

A number of different classifications of airport services is possible. Those used below broadly follow the ACCC (sub. 36) and Department of Transport and Regional Services (sub. 39) approaches.

6.2 Aircraft movement facilities

Aircraft movement facilities include runways, taxiways, aprons and aircraft parking, as well as airside grounds, airfield lighting, airside roads and lighting, airside safety, nose-in guidance, and visual navigation aids.

These facilities are essential to the operation of the airport. Planes arriving at an airport need a runway to land, taxiways are needed to move aircraft from the runway to aprons or parking areas etc. Airline discretion over aircraft parking may be higher than for the other components — to the extent that airlines have a choice about where to end their services for the day. Nonetheless, it is likely to be infeasible for airlines to move empty aircraft and flight crew to another airport simply to minimise parking charges, given the costs involved. Aircraft parking charges may, however, influence whether they park on the apron or elsewhere at the airport.

As well as being essential to users of an airport, these facilities, particularly runways and taxiways, are likely to be the most significant source of natural monopoly for airports. Indeed, as noted in chapter 5, to the extent that there are economies of scale in the provision of airport services, they derive mainly from the

provision of runways. Economies of scope arise in that different types of aircraft can land at the one facility (chapter 5). Hence, the supply characteristics are such that there generally will be only one supplier of these facilities in a location.

Thus, where an airport has market power, its market power in relation to aircraft movement facilities is significant (and effectively equal to its overall market power).

6.3 Passenger processing facilities

In broad terms, passenger processing facilities refer to all facilities that provide services to passengers, up to the point that they enter or exit the plane. They can include check-in desks, aerobridges, airside buses, departure and holding lounges (but not VIP lounges, which are discussed separately below), immigration and customs service areas, public address systems, closed circuit surveillance systems, security systems, baggage handling and reclaim areas, public amenities, other public areas in terminals, lifts, escalators, moving walkways and flight information display systems (ACCC, sub. 36).

Some forms of passenger processing facilities — such as check-in desks and baggage handling and reclaim areas — are required for both domestic and international traffic. However, there also are inherent differences in the nature and extent of processing facilities required for international, compared with domestic, services. In particular, immigration and customs service areas are required (by law) as part of the bundle for international airlines, but are not necessary for domestic travel.

As Qantas Airways and Ansett hold long-term leases over their domestic terminals (chapter 2), the airlines, rather than the airports, provide many domestic terminal facilities and services. In this case, BARA noted:

> … the service provided by the airport is access to space adjacent to the runways and taxiways upon which the terminal is located. (sub. 26, p. 4)

On the other hand, domestic new entrant airlines have relied on airports for direct provision (and construction) of common-user terminal facilities.

The extent of airport market power in these services will be determined by the degree of discretion airlines have over what is to be provided, the ability to build new facilities, and opportunities for off-airport provision of the services.

Australian Airports (Townsville) argued:

> Passenger processing facilities … may be used selectively by the customers and can be

> provided to the level of quality to meet the customers and end consumers needs. (sub. 14, p. 17)

The ability and willingness of airlines to tailor passenger processing facilities to the needs of their customers has been highlighted in Australia by the domestic new entrants. Terminals built to accommodate them have been more spartan than those of the established airlines. In addition, the preference of Virgin Blue not to use aerobridges shows that some of the facilities do not need to be used at all.[1] Of course, airline discretion about the extent of these facilities will vary depending on the main market segments they serve.

On the supply side, unlike runways, on-site incremental development of passenger processing facilities is feasible, so the barriers to entry may not be significant (especially if the extent of facilities required is small). Nonetheless, as the ACCC (sub. 36) noted, space constraints may limit the future ability to construct new terminals.

Where on-site expansion is feasible, issues appear to relate to access to airport land to build facilities or disagreements between the airline and the airport about the type of facilities that should be built. For instance, Impulse Airlines noted that 'there are issues in terms of what we think should be a standard of terminal supplied' (trans., p. 40). Virgin Blue also argued that:

> Where new facilities are required, in Virgin Blue's experience, some airport operators are not willing to be flexible about the standard of terminal facility which Virgin Blue is able to access. (sub. 30, p. 9)

In addition, Virgin Blue (sub. 30) submitted that it offered to construct a terminal at Melbourne Airport, and provide access to other entrants, but was refused by Australia Pacific Airports (Melbourne) (APAM), which decided to build its own common-user terminal. Following negotiation over the terms on which access would be granted to the terminal on a long-term basis, Virgin Blue has made an application for an access determination under section 192 of the Airports Act (chapter 9).

The Virgin Blue–Melbourne Airport case is one example of the difficulties that can arise in the negotiation process (negotiation over the Adelaide multi-user terminal is another example). However, it is not clear that it demonstrates an abuse of market power by the airport. Airports, including Melbourne, appear to have been eager to attract the business of new entrant airlines (who have sought new facilities from airports, rather than seek access to existing terminals operated by other airlines).

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1 However, where there is apron congestion, the choice of whether or not to use aerobridges is limited.

The problems that have arisen in this case seem to have stemmed primarily from a difference of opinion about what was appropriate and required. This seems to be an inherent problem of common-user facilities, rather than an issue of market power. It also must be noted that negotiations with Impulse over the same terminal were successful. Impulse Airlines noted that:

> … we signed a commercial agreement with Melbourne Airport … on a struck passenger charge, which we thought was fair to get the facility built. (trans., p. 40)

To the extent that off-site passenger processing is possible, the market power of airports in providing these facilities would be diminished. Participants noted that the possibility for off-site provision is limited at present but may grow as technology improves. Indeed, off-site check-in already exists in a number of places overseas (sometimes for international, as well as domestic, passengers) — at Gatwick (Victoria Station), Heathrow (Paddington Station), Hong Kong (Hong Kong Island Station) and Geneva (Cornavin Station), for example. According to Brisbane Airport Corporation (BAC):

> New technologies and processes are likely to provide alternatives to aspects of the current methods of international passenger processing, eg: electronic check-in, off-airport processing at hotels, in the CBD, on other transport modes (trains), etc. As these technologies and processes evolve, these services are unlikely to continue to satisfy the tests for monopoly infrastructure. (sub. 8, p. 13)

However, even with technological advances, the possibility for off-site provision may be limited to a small number of services. The ACCC, for instance, argued that:

> The majority of international passenger processing facilities, for example aerobridges, public areas in terminals and security systems, clearly must be provided on site. There is limited scope for some services such as check-in to be provided off site. But for many passengers, in particular international passengers in transit, off-site facilities are unlikely to be a viable option. (sub. 36, p. 80)

Overall, although the market power of airports in relation to passenger processing facilities is not as high as for aircraft movement facilities, airports with market power will have some market power in the provision of these facilities. Of the passenger processing facilities, market power is likely to be least significant for check-in counters. Though necessary, these also are most likely to be amenable to off-site provision. Check-in facilities currently are subject to price monitoring rather then the price cap (chapter 3).

6.4 Lounge space

Lounge facilities refer to business and VIP lounges that airlines provide for their customers. They do not include departure lounges (which comprise part of

passenger processing facilities discussed in section 6.3), or the domestic lounges of Qantas and Ansett (who have leases over their domestic terminals).

Lounges are not necessary to airlines or their passengers in the way that aircraft movement and some passenger processing facilities are. Nonetheless, they are part of the service offered by many airlines. The degree of market power that airports hold in the provision of these services depends largely on the extent to which airlines have discretion over the quantity and quality of lounge space that they use.

The behaviour of new entrants in the domestic market appears to show that lounges are largely discretionary. Hobart Airport noted that:

> … Impulse and Virgin are providing evidence that lounges aren't necessary in the scheme of things so I'd argue that we don't have market power in those areas. (trans., p. 328)

On the other hand, Ansett, Qantas Airways and BARA argued that airlines could not compete effectively without lounge space, since their customers demand it of them. BARA, for instance, noted:

> … lounge facilities are … demanded by airline customers and hence it is felt necessary to supply those services to the customers to meet that demand. It's only viable to have an airport lounge and to provide those services if that lounge is in fact in close proximity to the actual gate the passengers are going through. (trans., p. 223)

Since airports have control over access to areas near the gates, it was argued that they have market power in the provision of this space, enabling them to extract monopoly rents from airlines (BARA, trans., pp. 223–4).

Alternatively, the apparent strategic requirement for airlines to have lounge space could be used by airports as a bargaining tool in trying to resolve other issues with a particular airline. BARA argued:

> … the airport may deny or artificially delay access to space in a terminal required to provide an airport lounge in order to achieve a commercial advantage in other areas (for example, to resolve a dispute with the airport user). (sub. 26, p. 3)

Though this is possible (and perhaps likely), it is not clear that this type of bargaining strategy would be used exclusively by airports. In the past, for instance, anecdotal evidence suggests that airlines have refused to lease space pending agreements elsewhere.

Overall, although certain customer segments may expect business and VIP lounge space from their airline, and this space must be located at the airport, airlines appear to have a significant degree of discretion about the nature of the facilities. Further, the price of those facilities may just reflect the opportunity cost of that space for the

airport — that is, rentals the airport could earn from any other competitive activity, such as retailing — which, given their position, may be high. That is, they may reflect a locational rent. According to Hastings Funds Management:

> To date Melbourne Airport has concluded a number of successful negotiations in relation to international lounges … with no charges of abuse of market power. (sub. 19, p. 5)

There currently is no prices oversight of business or VIP lounge facilities.

6.5 Landside vehicle facilities

There has been some debate since privatisation about the composition of landside facilities and the extent to which these are covered by regulation.

For present purposes, landside vehicle facilities can be seen as falling into two broad categories — facilities (such as landside roads) that provide vehicle access to the airport and its terminals; and vehicle services provided landside (such as car-parking services and taxi waiting areas).

Vehicle access facilities

Airline passengers and other airport users (including staff) obviously require access to the airport and its terminals. And, ultimately, only the airport operator can provide such access.

The discretion airline passengers have relates to the means by which they obtain this access — whether it be in private vehicles, rental cars, taxis, buses, or trains. The operators of these arrival modes, such as taxi drivers and rental car operators, have a choice about whether they operate at the airport at all. However, the importance of airport-related business to their overall business dictates to a large extent the degree to which airports have, and could exercise, market power in their dealings with them.

Melbourne Airport accepted that 'it has a degree of market power with respect to the kerb in front of the terminal complex' (sub. 7, p. 72) but argued that charges on kerb users are justified since kerb users either:

- use other services provided by the airport, for which they should pay; or
- are in competition with other services (such as car rental and parking) for which access is paid.

However, the mere fact that there are charges for competing services does not necessarily justify charges for kerb use. Charges on competing services may reflect the exercise of market power.

An airport operator may want to shift demand for vehicle facilities to services provided more directly by the airport, such as car parking (as discussed below). To the extent that an increase in access charges for competing modes does this (and raises overall revenue), there may be an incentive for an airport operator to set excessive access charges. Thus, airports have, and may exercise, market power in the provision of vehicle access facilities.

Car parking

Two forms of car parking are provided at airports: facilities for passengers or those meeting passengers, and facilities for staff parking.

The ACCC (sub. 36) argued that all travellers require land access to the airport and, although several arrival modes are available, airport market power in relation to those alternatives gives airports market power in the provision of car parks. It also noted that it had found evidence in its assessment of Sydney Airport's pricing proposal that car parking is a service 'in which airport operators have a significant degree of market power' (sub. 36, p. 87).

However, others — such as BAC (sub. 8) and the Australian Council for Infrastructure Development (sub. 28) — argued that airports do not have market power in the provision of car-parking services. They cited competition from other modes and off-airport facilities as effective constraints on any potential airport market power. Melbourne Airport noted:

> Less than 20 per cent of passengers using Melbourne Airport use car parks provided by Melbourne Airport. In addition to the three public car parks provided by Melbourne Airport, Qantas and Ansett provide valet parking and there are at least 6 off airport car park operators. Thus in relation to car parks, airports have little market power … (sub. 7, p. 72)

Examples of rates charged for on- and off-airport car parking at and near Melbourne Airport are provided in box 6.1.

Substitution possibilities for airport car parking appear to be most significant for long-term parking. In some locations, a number of off-airport operators exist, and provide competition for on-airport facilities. This competition is possible because establishing car parks does not appear to require large and lumpy investments. The major investment appears to be in land, which is not sunk. In addition, travellers

who potentially would use long-term parking are those most likely to find other travel modes, such as taxis, an attractive and cost-effective alternative.

Box 6.1 **Car parking at and near Melbourne Airport**

There are several car parks at or near Melbourne Airport. Some off-airport operators advertise that they provide short- and long-term parking. Indicative rates at car parks on- and off-airport (obtained from the websites of the operators) are provided below.

- Parking rates at Melbourne Airport's short-term car park (mostly undercover) start at $5 for the first hour, and $9 for 1-2 hours. The hourly rate falls as cars are parked for longer periods — for instance, parking for 9-12 hours costs $22 and for 12-24 hours costs $28.
- Parking rates at Melbourne Airport's (not undercover) long-term car park are $15 for one day, $20 for 1–2 days, $50 for a week, and $98 for two weeks. The third week costs an additional $8. The long-term car park is within walking distance of the terminal, though regular shuttle bus services also are provided. Melbourne Airport also offers undercover 'business parking' near the Qantas terminal that costs $20 per day.
- Some off-airport operators provide undercover or outdoor parking. They provide transport (usually shuttle buses) to the airport terminal (generally a few minutes away) and 24-hour security. They also tend to provide other services, such as car detailing, at additional cost. Rates and rate structures differ across providers. There are at least six providers of off-airport car parking near Melbourne Airport. Examples of rates at two of these providers are given below.
  - One operator has 350 undercover and 450 outdoor spaces. The first day of parking costs $10 (outdoor) or $14 (undercover). This increases to $16 (outdoor) and $21 (undercover) for two days, $48 (outdoor) and $61 (undercover) for one week, and $84 (outdoor) and $106 (undercover) for two weeks. Additional days cost $4.50 per day (outdoor) and $5.50 (undercover).
  - Another operator provides undercover parking at $9.90 per day for the first five days, $8.80 a day for days 6–9 and $5.50 a day thereafter. Thus the cost of parking for two days would be $19.80, a week would be $67.10, and a fortnight would be $112.20.

The direct supply-side substitution possibilities for short-term car parking appear to be more limited as proximity to terminals is likely to be more important for those using short-term than for those using long-term parking. Nonetheless, other providers may emerge — for instance, Delta operated short-term parking near Melbourne Airport (chapter 9), and some other off-airport operators advertise that they provide short- and long-term parking (box 6.1). Further, rates for short-term parking will be constrained to some degree by those set in the more directly competitive long-term parking market. In addition, unlike long-term parking, many of the users of short-term parking are not airline passengers, but rather those meeting passengers or driving them to the airport. They have some options about

whether to use airport car parks — dropping people off without parking, or arranging to pick them up outside terminals, for instance. Nonetheless, to the extent that airports have market power in car parking, it is likely to be more significant in short-term parking.

Staff may have less discretion than travellers in terms of how they reach the airport and where they park. Taxis are unlikely to be a viable option for commuting so, unless other public transport options are available, most staff are likely to need to drive to (and hence park at) the airport. Thus, it would appear that airport market power in car parking is likely to be relatively more significant in staff car parking. However, airport staff — including management — will be users of the staff car park. This would reduce incentives to exploit potential market power, unless the airport operator can discriminate between airport and airline users of staff car parking (for example, by providing separate parking areas or by charging employers rather than employees for parking).

Participants cited high airport car-park prices and profits as potential indicators of the exercise of market power — for instance, the ability of Sydney Airport to levy and sustain charges in excess of potential competitors (ACCC, sub. 36). However, it is not clear that the Sydney Airport charges cited by the ACCC — around $13 a day for long-term car parking, compared with off-airport charges of $10 a day — reflect market power. It is reasonable, and perhaps likely, that it largely reflects the greater convenience of parking closer to the airport. In other words, it may reflect locational more than monopoly rents — that is, the value placed on the scarce resource by consumers, not scarcity created by the airport operator (appendix C). Further, it appears that providers of long-term car parking offer somewhat differentiated products (in terms of rate structures and services offered (box 6.1)), complicating comparisons of on- and off-airport car parking rates.

At a more general level, high short-term parking rates sometimes are cited as an indication of abuse of market power. As noted above, airports are likely to have more market power in short-term than long-term parking. Thus, parking rates could partially reflect the exercise of market power.

However, there also are likely to be locational rents associated with the provision of space close to terminals. In addition, the opportunity costs of having to maintain space that may only be used for short periods may be relatively high. This might explain, to an extent, the relatively high hourly rates in short-term parking, not only at the airport but at most CBD car parks.

Further, as noted above, short-term rates may be constrained to an extent by long-term car parking rates. At Melbourne Airport, for example, the hourly rate falls significantly for those parking for 9–24 hours (box 6.1). Though the cost of parking

for a day in the short-term car park is still considerably higher than the long-term full day rate, this partially could reflect the value of proximity to terminals. People also have a choice at Melbourne Airport of paying $28 (short term), $20 (business) or $15 (long term) to park for a day.

Some airports (such as Sydney and Melbourne) have indicated that their car-parking rates are based on benchmarks, such as CBD parking rates. It has been suggested by some participants that using such benchmarks is indicative of the use of market power. Professor Forsyth argued (and the ACCC (sub. 36) agreed):

> If rents are true locational rents, the seller does not set the price with reference to benchmarks (of questionable relevance); rather, the seller takes what the market offers. (sub. 5, pp. 30–1)

However, the use of benchmarks does not of itself indicate an abuse of market power. First, it is not clear that a true monopolist would need to use a benchmark at all. Second, in practice, the discovery of the 'market price' is an iterative process that may be assisted by the use of a benchmark. On the other hand, the use of a benchmark also does not indicate necessarily that market power has not been abused.

Further, to the extent that significant expansion of car-parking space occurs, this would not appear to be consistent with monopoly pricing behaviour unless demand is also expanding rapidly.[2] Since privatisation, several major airports have undertaken and/or plan major car-park expansion. Melbourne Airport, for instance, plans to expand car parks during 2001-02 (chapter 2).

BARA (subs 26 and 41) noted that staff car-parking charges at Sydney Airport recently increased significantly. BARA questioned whether these increases were justified though it acknowledged that, of itself, an increase of such proportions does not necessarily represent an abuse of market power. Prices could be expected to reflect the opportunity cost of the land, as well as operating costs. It may be that starting prices were inefficiently low.

- Some of the former staff car-parking area was converted to aprons, suggesting the opportunity cost of the space was high — and hence, that initial prices may have been low.
- Sydney Airport Corporation Limited (SACL) argued that even the new prices do not allow full cost recovery (SACL, pers. comm., 25 July 2001). This would suggest that the prices do not reflect an abuse of market power. The ACCC does

2 As noted above, car parks do not appear to be natural monopolies (the costs of establishing car parks appear to be modest). Therefore, it is unlikely that an airport operator would increase capacity strategically to stymie competition from other potential providers.

not appear to have raised concerns about the price increases under its monitoring function.

Further, the market power of Sydney Airport in staff car parking may be reduced by off-airport parking that is of comparable convenience to the SACL facility (SACL, pers. comm., 25 July 2001). In addition, the train link to Sydney Airport may provide a potential substitute for driving to, and parking at, the airport for workers.

Some participants also suggested that airport market power in car parking could be exercised by limiting access to the airport by companies that provide competing services. As BARA commented:

> … although an airport may lease the management of on-airport car parking facilities, the airport nevertheless has an incentive to deny or limit access to the airport of off-airport parking companies (such as valet parking companies). Such a strategy will increase the demand for the on-airport parking services and increase the value of the car park lease. (sub. 26, p. 3)

As noted above, because the airport operator has sole control over access to the airport, there may indeed be an issue relating to access by competing modes.

Overall, it appears airports are unlikely to have significant market power in long-term car parking. The market power of airports in car parking is likely to be more significant for short-term and possibly staff parking, but there also are factors mitigating the extent of market power in these facilities. Because many of the users of short-term car parks tend not to be passengers, alternatives to using the car park are available. The use of staff parking by airport staff may reduce incentives to exercise any market power in these facilities, particularly where airport operators do not discriminate between airport staff and airline staff in car parking.

To the extent that airports have market power in car parking, it is likely to be constrained as long as landside access for competing operators (of other travel modes, such as taxis, and competing off-site parking services) is available on reasonable terms and conditions.

Taxi facilities and charges

Airports provide a number of facilities for taxi services — such as parking areas for waiting taxis and, in some cases, queue management systems (although taxi companies operate these at some airports). Airports also provide areas for taxi ranks for arriving and departing passengers.

Travellers and taxi drivers have some discretion over their use of these facilities. Passengers can choose to travel to and from the airport using modes other than

taxis. Taxi drivers who transport passengers to the airport need to use designated sites. However, they have a choice about whether they pick up passengers from the airport. Anecdotal evidence suggests that many drivers who take people to an airport then move on to other nearby areas rather than wait to collect another airline passenger. In this case, they do not need to use queue management or taxi parking services.

Nonetheless, to the extent that taxis and passengers use taxi services, there are no on-site alternatives to the airport-provided (or approved) queue management system. Viable off-site alternatives also appear limited — though it might be possible to provide holding bays adjacent to, but off, the airport site. In addition, as already noted, there may be issues as to whether an airport may wish to use its control over landside access to shift demand to airport-provided car parks etc. There might, therefore, be some access issues related to the provision and pricing of these facilities.

Since privatisation, four core-regulated airports have levied some form of taxi charge. Of these, only Melbourne linked them to a necessary new investment proposal (submitted after the Federal Court ruled ground access fees at Canberra were charges for landside roads), although WAC pointed out that it also provided 'substantial facility enhancements to cater for the expressed needs of the taxi industry' (sub. 21, p. 23).

Much of the debate over the charges has surrounded the issue of whether they should be included in the price cap. This rests primarily on the question of whether they should be considered charges for access to 'landside roads'. Discussion of this issue is contained in appendix E. In this section, consideration is given to the extent to which the levies charged may reflect an abuse of market power.

Because the precise nature of the levies has differed across airports, it is difficult to make a general judgement about whether market power is reflected in their imposition. Nonetheless, some general issues can be noted.

As discussed above, airports have control over the provision of landside access. To the extent that the charges can be considered access charges, they are charges for services for which airports have market power.

However, airports have argued that they should more properly be seen as charges for facilities provided, or concession charges such as those for retail space. WAC, for instance, argued that:

> … the ground facilities fee is not a levy on taxis or any other commercial vehicles for access to the airport. The fee puts in place an equitable system of charges at the airport for all businesses that derive revenue from the airport market, and is consistent with

> charges levied on car rental operators that are in place and not regulated. Ground facilities fees are commonplace at airports elsewhere in the world, reflecting the principle that those who benefit from the airport's growth, should contribute to its revenue base. (sub. 21, p. 23)

That airports in other countries impose these fees does not of itself mean that their imposition is not an abuse of market power.

Nonetheless, there appear to be some good arguments that these charges are not entirely fees for access to 'landside roads' (appendix E).[3]

The charges tend not to be levied on taxis setting down passengers, hence they are not levied for all taxi access to the airport.

In addition, costs are incurred by airports in the provision of taxi facilities. According to Melbourne Airport, for example, it incurs about $750 000 a year in labour costs to 'call up taxis and push them through' (trans., p. 171). There also are opportunity costs in the provision of substantial areas for taxi holding bays — the new facilities at Melbourne Airport will provide 790 car spaces — as well as infrastructure costs.

Thus, charging for these services does not of itself reflect an exercise of market power. Indeed, Melbourne Airport contended that it was subsidising taxi services by not imposing charges:

> We deliberately took the decision, unlike many other airports, not to impose a taxi charge; to keep on wearing that subsidy ourselves for as long as we possibly could. (trans., p. 170)

Given that both parties benefit in some way from the taxi management system, then it may be optimal for some sort of cost sharing to occur. What is an optimal proportion of costs to be shared by each party may change over time.

Hence, even if there is no increase in costs (for example, due to new investment), imposing a new charge, or increasing an old charge, does not reflect necessarily an abuse of market power.

Overall, off-site and on-site alternatives to airport-provided taxi parking facilities are limited but passengers and taxi drivers have some discretion in their use of these facilities. Passengers can use other modes and taxis use the parking facilities only if they pick up passengers. On balance, the market power of airports in providing these facilities appears moderate. The ability of airports to impose charges above

3 The Federal Court found in a 'line ball' decision that the ground access charges at Canberra related to landside roads but this decision is being appealed (appendix E).

efficient levels appears to be limited if access for competing modes is provided on reasonable terms and conditions.

6.6 Aircraft refuelling

Aircraft refuelling facilities at larger core-regulated airports are built and operated by oil companies as a Joint User Hydrant Installation (JUHI) on land provided by the airport operator.[4] Thus, airport operators directly provide only one element of the refuelling service — the land. It is the lease of airport land to oil companies that raises issues of market power.

Aircraft obviously need fuel but airlines do not necessarily need to refuel each time they land. For larger jets on domestic short-haul flights, airlines may have some discretion over where they refuel. The ACCC noted that 'to minimise airlines' running costs, aircraft generally do not carry more fuel than necessary. As such, aircraft often refuel upon each landing' (sub. 36, p. 82). Nonetheless, some discretion remains.

Over longer distances, including long-haul international flights, on the other hand, refuelling must take place at each landing. In this case, discretion over refuelling at a location is limited to the decision of whether they fly to a particular airport at all.

Therefore, the market power an airport holds in these facilities depends on whether there are off-airport alternatives and the degree to which other airports can be substituted for refuelling.

For larger airports, there appear to be limited off-airport alternatives to refuelling.

- Trucking fuel from off-site to refuel aircraft at large, and often busy, airports will be considerably more costly to airlines.
- Safety requirements may preclude trucking as a practical option.
- The alternative of aircraft taxiing to the airport boundary to refuel from an off-site facility would not be an economic or practical option. As the ACCC noted, 'This effectively limits the extent to which potential entrants can compete against the airport for the provision of refuelling services' (sub. 36, p. 82).

[4] At smaller airports, where the volume of fuel throughput is lower, arrangements may differ — at Hobart, for instance, the trucking of fuel to the aircraft is the means by which refuelling takes place. However, the airports where this occurs are those assessed in chapter 5 as not having market power, so this method of refuelling does not apply to the airports included in the assessment of this chapter.

The viability of airport substitution for refuelling varies according to the airport and route being considered. For example, if an aircraft operates Sydney–Melbourne–Canberra–Sydney, it may be possible to choose not to refuel at one of those airports. On the other hand, for aircraft flying between Perth and the eastern seaboard, it is uneconomic not to refuel at each port. Likewise, for international flights, aircraft must be refuelled at each landing. Qantas, in its submission to the ACCC review of fuel throughput levies, noted in respect to Brisbane and Perth airports:

> The only alternative to purchasing fuel from those oil companies is to bring fuel on to the airport by land transport or refuel at other airports and carry the additional fuel to Brisbane or Perth. Either alternative is uneconomic and would increase the cost of fuel to Qantas by 1 to 2 cents per litre and the cost of flying to those ports even more. (sub. to ACCC 1998b, p. 6)

The greater the proportion of long-haul flights through an airport, then, the higher the degree of market power it is likely to have. Given this, the isolation of Perth is likely to grant it a degree of market power in refuelling that is equal to its market power in landing. Refuelling in this case is part of the non-discretionary bundle of airport services. In terms of Brisbane Airport, although its most significant domestic traffic is generated from the relatively short Brisbane–Sydney route, a high proportion of its traffic also is generated on longer routes, such as Brisbane–Melbourne and Brisbane–Cairns (chapter 2). Therefore, it also may have a fairly high degree of market power in the provision of refuelling services.

Sydney Airport services a significant proportion of short-haul traffic, which would tend to lower its market power in refuelling. However, its status as a quasi-hub (for domestic and international traffic) may offset this somewhat. On balance, it appears that Sydney Airport has a significant degree of market power in refuelling, though this does not appear to be as high as for Perth Airport.

The other airports may have a less significant degree of market power in the provision of refuelling facilities. For Melbourne Airport, the proportion of its traffic generated from shorter routes, particularly Sydney–Melbourne, is far more significant than from longer routes such as Melbourne–Perth and Melbourne–Brisbane (chapter 2). Darwin would have a relatively high proportion of longer haul traffic, so is likely to have market power in refuelling equal to its overall market power. Apart from having a lower degree of market power overall (chapter 5), most traffic through Canberra Airport is generated from short-haul routes, further diminishing its degree of market power in refuelling. Adelaide also is likely to have a lower degree of market power in refuelling, given its lower market power overall.

Although aircraft on international flights need to refuel in Australia, the degree of market power of any one airport in refuelling is mitigated to an extent by the potential for competition in attracting international services (chapter 5).

That said, airports that have market power are likely to have at least a moderate degree of market power in the provision of aircraft refuelling services. Indeed, Melbourne Airport noted that 'a case can be made that there is market power with respect to refuelling services' (sub. 7, p. 36). The extent of market power is likely to be highest for Perth, and to a lesser degree, Brisbane and Sydney airports.

Are fuel throughput levies evidence of abuse of market power?

At larger airports, oil companies pay licence fees and rent to the airport operator for use of the land. A fuel throughput levy has been imposed, in addition to the land rental, at Brisbane and Perth airports.[5] The imposition of the fuel throughput levies has generated a significant amount of debate, particularly about the extent to which they reflected an abuse of market power. The issues are outlined briefly in this section and in more detail in appendix E.

Of itself, the restructuring of the charge is not evidence of an abuse of market power. A two-part pricing structure may be a more efficient way of pricing the service. It also may indicate a change in attitude to risk by airport operators. Some airport operators commented that it was reasonable that the risks be shared. Northern Territory Airports explained:

> Rather than introduce higher base lease and licence fees, airports are attempting to share risks by making their own revenues contingent upon fuel sales volumes. (sub. to ACCC 1998b, p. 2)

Indeed, the airports involved contended that the fact that they were simply exercising a contractual right to impose the levy meant that they had not abused market power. BAC, for example, argued:

> BACL strongly refutes any suggestion that it has abused its market power because it 'activated' a fee covered by an existing contractual arrangement and determined as reasonable by an independent expert. (sub. to ACCC 1998b, p. 5)

However, even if they were exercising a contractual right, this does not mean necessarily that the imposition of the charges did not reflect an abuse of market power. In addition, even if the imposition of a charge of that type would not have been an abuse of market power, the level of the charge imposed might have been.

Neither BAC nor WAC, in their submissions to the ACCC, attempted to justify the fuel throughput levies on the grounds of increased costs, the provision of additional services or offsetting reductions in other charges.

5 The levy at Perth Airport is imposed on the international terminal only.

Thus, the ACCC concluded:

> When considered in light of the lack of any cost related justification for the levies, or offsetting reduction in charges, there is a strong case that the imposition of a fuel throughput levy is taking advantage of market power. (ACCC 1998b, p. 7)

If the imposition of the levies had been justified on cost grounds, claims of abuse of market power would have been more difficult to substantiate. Nonetheless, a lack of cost justification, of itself, does not indicate an abuse of market power, either. It may be that the previous charges were at inefficiently low levels, in which case, there did not need to be an increase in costs to justify an increase in charges.

The critical issue, then, relates to whether the charges — of 0.4 and 0.5 cents per litre for Brisbane and Perth respectively — were above efficient levels.

On the basis of the evidence provided to the ACCC review, it is difficult to ascertain whether the charges exceeded an efficient level. The levies resulted in an increase in total revenues derived from refuelling services, but the review presented no information on expected normal rates of return from refuelling facilities. BAC contended that the charge was a 'reasonable market rate' with reference to fuel throughput levies at airports in other countries. This was supported by the determination of the 'independent expert', a Queen's Counsel jointly appointed by the parties (sub. to ACCC 1998b). Of course, the fact that fuel throughput levies are charged in other countries may simply reflect the exercise of market power by airports in those countries.

In its submission to the ACCC review (quoted above), Qantas implied that it would not be economic to switch to refuelling at airports other than Brisbane and Perth unless the levy increased to above 1–2 cents per litre. A monopolist maximising profits might therefore be expected to charge a fuel throughput levy of up to 1–2 cents per litre without losing business. The fact that airport operators are charging considerably less than this amount could indicate that there are economic, political and/or legal constraints on their ability to maximise profits by abusing market power, or that a more gradual approach to changing charges is preferred because of the sensitivity of the issue.

On balance, the extent to which airport operators have abused their market power is unclear. Contractual rights are not evidence one way or the other, and the lack of cost justification for imposing fuel throughput levies does not necessarily indicate an abuse of market power. Moreover, the extent to which the levies are in lieu of the rent component and/or exceed, if at all, an efficient price is not known. That said, since these airports do have fairly high degrees of market power in the provision of refuelling, the potential for abuse remains.

6.7 Maintenance facilities

Two types of maintenance are performed on aircraft: light or emergency maintenance, and heavy maintenance.

Aircraft light/emergency maintenance sites

Light and emergency aircraft maintenance involves unplanned maintenance and is essential to the safety of airline operations. Being unplanned but essential, facilities to carry out these tasks must be provided at all airports. According to the ACCC, 'for safety and operational reasons the major airlines would be unlikely to fly to airports that did not have light or emergency maintenance facilities' (sub. 36, p. 82).

In addition, it appears that off-site provision of these services generally is infeasible. Again, the ACCC noted:

> As aircraft often stop at airports for only a brief period of time, such repairs need to be done on site. The time wasted, and costs associated with, moving the aircraft to an off-site location for such unplanned maintenance could lead to aircraft delays and significant additional costs to airlines. (sub. 36, p. 82)

Nonetheless, the Department of Transport and Regional Services (sub. 39) argued that airport market power in the provision of light maintenance is low since airlines and third parties, rather than the airport itself, provide the services on a contract or fee for service basis.

If this is the case, any market power of airports would relate to the provision of access to the third parties who directly provide the service. Qantas submitted that:

> In order to provide these services, maintenance workers require access to land within the airport, and aircraft parking space on which to conduct the maintenance. The airport is a monopoly provider of these access rights and aircraft parking locations. (sub. 48, p. 16)

Overall, airports with market power are likely to have some market power in the provision of aircraft light/emergency maintenance sites, though this predominantly is an issue of access to the site to enable third parties to provide the service. It does not appear that access has been an issue so far.

Aircraft heavy maintenance facilities

Aircraft heavy maintenance involves periodic and planned maintenance, such as engine overhauls or refurbishing aircraft. Heavy maintenance is essential to the (safe) operation of airlines.

Although heavy maintenance facilities are required by airlines, the evidence suggests that airlines have a large degree of discretion about the location of these facilities. Indeed, heavy maintenance facilities do not need to be located at every airport since 'aircraft owners can simply schedule the performance of heavy maintenance when aircraft are at an airport that has the relevant facilities' (ACCC, sub. 36, p. 83). Melbourne Airport (sub. 7) suggested that the market for sites can be local, national, or even global.

A number of participants — such as Melbourne Airport, WAC and SACL (subs 7, 21 and 27) — cited recent examples of airports competing for these facilities. These included the location of the Qantas Boeing 767 maintenance facilities in Brisbane, rather than Melbourne or Auckland. In this case, according to Melbourne Airport 'it [is] important to realise that Qantas took an active decision to relocate this activity away from Sydney' (sub. 7, p. 69). In the case of Perth Airport, WAC submitted:

> … maintenance facilities for National Jet Services established on the airport several years ago were competitively secured in the presence of competition from other Australian airports. (sub. 21, p. 31)

It also is feasible for these facilities to be located off the airport site or at nearby 'secondary' airports. Melbourne Airport, for instance, noted that 'Ansett has significant maintenance facilities located just beyond the airport boundary' (sub. 7, p. 68). And the ACCC commented:

> It may be feasible for such facilities to be located near the airport site, as long as aircraft operators have access on reasonable terms to a road or tarmac suitable for moving aircraft from the airport to the off-site heavy maintenance facility. For example, Avalon Airport has heavy maintenance facilities which service Qantas aircraft. (sub. 36, p. 82)

Ansett noted that competition between locations for heavy maintenance facilities is driven mainly by competition between governments, not airports:

> In Ansett's Australian experience, whilst airports may offer some incentives to base facilities such as these at their airport, generally, the greatest source of competition and incentive packages is between State Governments (due to the employment and state based investment generated etc) rather than the airports in question. (sub. 42, p. 17)

If anything, however, the importance of governments — and other factors outside the control of airports — in the bidding process, may diminish further the market power of individual airports. According to Melbourne Airport:

> … individual airports have little market power especially as location decisions seem to be driven largely by industrial relations issues, availability of skilled labour, and government incentives. (sub. 7, p. 69)

However, once heavy maintenance facilities are established at a particular airport, an airline that decides to relocate its facilities may incur sunk costs. As noted by Qantas, for instance:

> These [heavy maintenance] facilities are substantial, and represent sunk investments, with specialised labour requirements. Qantas acknowledges that in respect of future investment in heavy maintenance facilities, it is able to exercise a degree of choice regarding the location of such future investment (subject to a variety of labour and locational constraints). However, Qantas has little ability to relocate existing sunk investment. In respect of such investments, Qantas is to a degree captive to the market power of airport operators. (sub. 48, p. 16)

This, in the short term, may give the airport at which the facilities are located some market power. Nonetheless, when negotiating the contract for heavy maintenance facilities, airlines also could negotiate long-term pricing and service agreements for other airport services to cover a period that would allow them to recoup heavy maintenance establishment costs. This would reduce the market power of the airport.

Overall, it appears that the market power of individual airports for heavy maintenance facilities is negligible.

6.8 Flight catering facilities

Flight catering facilities do not appear to be necessary for all air services. Although they are necessary for long-haul international flights, on shorter flights (and smaller aircraft — ACCC, sub. 36), extensive meals are not required.

Even where they are required, there appear to be viable supply-side substitution possibilities. As the ACCC (sub. 36) noted, the required infrastructure does not have high sunk costs, nor do all airports need to have flight catering facilities.

Further, meal preparation can occur off-site, with food transported to the airport. Melbourne Airport noted that:

> Sites for catering facilities may also be provided by the airport but in the case of Gate Gourmet, the largest independent caterer operating at Melbourne Airport, their kitchens are located at a location near to but off the airport. (sub. 7, p. 68)

In this case, the market power of airports appears to be negligible, as long as access to the airport is provided. Although airports could limit access, it does not appear that access has been an issue to date.

6.9 Freight handling and ground service equipment storage sites

Freight handling equipment is used by terminal operators, handling agents and airlines, and ground service equipment is used for pushing aircraft on the airport apron. Participants noted that the issues relating to freight equipment storage sites and ground service equipment storage sites are similar so they are dealt with together.

Ground service and freight handling equipment are used frequently, and their storage is essential to airlines. Storage sites require some area of pavement (with flood lighting), and could include freight or passenger aprons or hard stands.

Determining the market power of airports for these storage sites requires an assessment of the extent to which they can be located off-airport, and the extent to which airports are likely to constrain the availability of land for these purposes so as to increase rentals above opportunity cost.

In assessing the Australian Cargo Terminal Operators access case (chapter 9), the National Competition Council argued that off-airport storage of freight handling equipment is technically possible but commercially infeasible, given the additional costs it would impose on users (NCC 1997). It also would reduce operator efficiency and flexibility.

On the other hand, in submissions to this inquiry, airports have argued that they do not exercise market power in storage sites, and that economic barriers to entry are not significant. Melbourne Airport, for instance, noted that:

> Terminal operators, handling agents and airlines store a good proportion of this equipment on their leased premises. The remainder is stored in common 'GSE' areas on or adjoining aircraft parking aprons free of charge … some users have approached Melbourne Airport seeking to pay for dedicated sites … There is currently no abuse of market power here and little likelihood as long as land for leased sites remains available. (sub. 7, p. 73)

WAC argued that, though it charges for these sites, these charges comprise a small portion of its aeronautical revenues, and furthermore:

> The adequate supply of airside land at PIA [Perth International Airport] provides incentives for WAC to encourage take-up of these facilities. (sub. 21, p. 31)

Overall, it appears that issues in relation to freight handling and ground service equipment storage sites are predominantly access related. It does not appear that airport operators currently have an incentive to exercise market power in these facilities.

6.10 Freight facility sites and buildings

Freight facilities are used for the loading, unloading and short-term storage of freight. Though these facilities are necessary to airlines, there appear to be supply-side substitution possibilities.

Both Melbourne Airport (sub. 7) and WAC (sub. 21) noted that there is significant competition between airports for freight facilities, and that airports have little incentive to constrain land for these facilities. Specifically, Melbourne Airport noted:

> Abuse of market power is unlikely at airports where apron and land is available for expanding cargo facilities because it will always be profitable for airports to expand activity … If land is not available, the issue won't arise … (sub. 7, p. 73)

In its assessment of the Australian Cargo Terminal Operators case, the National Competition Council also concluded that it was economic to duplicate a site off-airport, as long as there was vehicle access to the airport. Indeed, the ACCC noted that off-airport duplication 'freely occurs' (sub. 36, p. 84).

Therefore, it appears that airport market power in the provision of freight facility sites and buildings is negligible.

6.11 Waste disposal facilities

Aircraft that land at airports need to dispose of waste such as sewerage, aircraft oil and food. Although the service is necessary, it appears that substitution possibilities are significant. As noted by the ACCC, many alternative facilities are available and:

> If the airport operator provides the airlines (or contractors who provide waste disposal services) with reasonable conditions of access to the airport site to enable the disposal of waste, then off-site waste disposal facilities appear a viable alternative. (sub. 36, p. 86)

Thus, airport market power in waste disposal facilities appears to be negligible.

Technically, as with the provision of other services that require access to the airport site, the airport operator could exercise market power by restricting access to the airport. The airport operator is unlikely to do so in the case of waste disposal facilities (although it could award contracts for waste disposal to a monopoly provider).

6.12 Administrative office space

Office space at airports is used by airlines to perform administrative functions and provide facilities, such as lockers and change rooms for their staff.

Participants (airlines, airports and the ACCC) agreed that airlines need some form of office space at airports. There was, however, disagreement as to the discretion airlines have over the amount of space they procure for offices, and therefore, the amount of market power that airports have in providing this space.

For instance, the ACCC commented:

> With the growth of telecommunications and the development of information technology services, there is a reduced need for administration to be situated in any specific location. Indeed many airlines' administrative functions are not located on airport, but in off-airport offices. In some cases airlines are even undertaking administrative functions overseas because of labour cost differentials. (sub. 36, p. 84)

On the other hand, Qantas argued:

> … there is an issue about how big the offices are, but certainly we need offices … there's a necessity somewhere for … staff to go, and they're sort of a minimum size, given the number of staff that we have at the international airports. (trans., p. 263)

There also has been disagreement over the extent to which office rentals at airports reflect abuse of market power. Hastings Funds Management, for instance, argued that office rents at Melbourne Airport have not been increased since privatisation 'despite the capacity to do so' (sub. 19, p. 5). In contrast, Virgin Blue argued that 'APAM's [Melbourne Airport's] charges for … office space rental … are substantially above commercial market rates' (sub. 30, p. 17).

Even if office rentals appear significant, the question is whether these reflect locational or monopoly rents. BARA (trans., p. 224) argued that they reflect monopoly pricing, not just locational rents. Professor Forsyth noted that:

> … if airports are setting rents for terminal space with reference to benchmarks such as rents in the CBD, this is symptomatic of use of market power. (sub. 5, p. 30)

However, as noted above in relation to car parking, to the extent that benchmarking is used, this does not imply that market power is being abused. On the other hand, it also does not imply necessarily that market power is not being abused.

Melbourne Airport (sub. 7) commented that users compete for terminal space that has alternative operational or commercial uses. On the other hand, Qantas noted:

> … offices for airlines … tend to be in areas which by and large the alternate use is not

> retail. They tend to be right up the top in the gods, rather than areas sitting out on the finger where you would be competing with retail. (trans., p. 264)

On balance it appears that, although airlines require some office space, discretion over the amount procured at airports is fairly high, and airport market power is moderate at most.

6.13 Commercial and retail activities

Airports, particularly larger ones, provide space for various retail facilities, including food and beverage outlets, shops (such as duty free outlets), and advertising.

Participants commented on the significant expansion of retail space that has occurred since privatisation. This, it was argued, indicates that airports do not exercise market power in the provision of retail space. On the other hand, Qantas (sub. 48) argued that airports have significant market power in commercial and retail activities, and earn above normal returns in these activities.

Several factors appear to constrain the market power of airports in the provision of retail space. First, apart from some last-minute purchases, in most cases, visitors to an airport do not have to make retail purchases there. Second, when leasing space to businesses, airports compete with other providers of retail space, such as shopping centres. Competition in product markets would put a ceiling on the rent a tenant can afford to pay, while remaining viable (and some airports have retail pricing policies to ensure that prices charged at airports are not higher than at equivalent locations). Finally, in the case of duty free outlets, there are not only off-airport options for purchase, but travellers can decide to make purchases at airports overseas, or on flights.

Thus, retail rents at airports would reflect locational, but not monopoly, rents (appendix C). Melbourne Airport argued that:

> … expansions of space must — quite obviously — be carefully planned and integrated into the logistics of the airport. When licensing to our concessionaires, no undertaking is made not to build more retail space.
>
> Accordingly it seems reasonable to conclude not that commercially imposed limitations on space drive up prices at the airport, but rather that the location drives up the value of sizes that can be hosted there. In this sense, as Kahn reminds us, prices determine the rents that can be charged — not rents prices. (sub. 7, p. 3)

In addition, Melbourne Airport (sub. 7) provided information to explain why returns to retail space appear to be higher in airports than other retail areas. These included

the average incomes of international travellers (and hence the product ranges offered) and the longer opening hours of the airport. It argued that, controlling for these factors, returns to retail space at Melbourne Airport are not significantly higher than other retail centres. For instance, its international terminal sales of $1.80 per square metre per hour compared with $1.79 for Chadstone and $1.59 for Highpoint shopping centres. As the airport noted, the value of sales in the shopping centres may be lowered somewhat by the presence of lower-priced supermarkets and department stores.

The Commission has not received evidence to indicate that retail rents reflect monopoly pricing.

Overall, it appears that airports have little, if any, market power in the provision of retail space. They compete with other providers of retail space, they do not appear to restrict retail space, and consumer purchases at airports are largely discretionary. Retail rentals at airports appear to reflect locational rather than monopoly rents.

6.14 Summary

The degree of market power held by airports differs depending on the service being considered. The results of the analysis in sections 6.2 to 6.13 are summarised in table 6.1.

Table 6.1 **Market power of airports in particular services[a]**

Service	*Degree of market power*
Aircraft movement facilities	High
Passenger movement facilities	Moderate/High
Lounge space	Low
Vehicle access facilities	High
Car parking	Low/Moderate
Taxi facilities and access	Low/Moderate
Aircraft refuelling	Moderate/High (case-by-case)
Aircraft light/emergency maintenance sites	Moderate
Aircraft heavy maintenance facilities	Low
Flight catering facilities	Low
Freight and ground equipment storage sites	Low
Freight facility sites and buildings	Low
Waste disposal facilities	Low
Administrative office space	Low/Moderate
Commercial and retail activities	Low

a This is based on the airports that were assessed in chapter 5 to have market power. Where a range of degrees of market power is indicated (eg moderate/high), this means that market power may vary by airport, or by the particular component of the service in question.

The most significant market power is held in facilities that are necessary to users and for which the supply-side substitution possibilities are limited. Thus, where airports have market power, it is most significant in aircraft movement facilities, vehicle access, some forms of passenger processing facilities and aircraft refuelling. With respect to aircraft refuelling, market power is most significant at airports, such as Perth, that have a high proportion of long-haul flights.

Market power is least significant in facilities or services for which users have discretion over the quantity or quality purchased and/or there are significant supply-side substitution possibilities. This includes aircraft heavy maintenance facilities, flight catering facilities, freight and ground equipment storage sites, freight facility sites and buildings, waste disposal facilities, administrative office space, and commercial and retail activities.

Where service providers potentially compete with the airport in the provision of services, there may be an issue of access if the service must be provided on the airport site.

DRAFT FINDING 6.1

For those airports with moderate to significant market power, the degree of market power varies across the services provided. It appears to be most significant in aircraft movement facilities, vehicle access, some forms of passenger processing facilities and aircraft refuelling. With respect to aircraft refuelling, market power appears to be most significant at Perth, Brisbane and Sydney airports.

Where service providers potentially compete with the airport in the provision of services, access may be an issue if the provider requires access to the airport site.

The Commission welcomes information from participants that enables further analysis of the market power of airports in particular services provided by or at airports.

7 Conduct of unregulated airports

Analysis in chapters 5 and 6 concluded that major core-regulated airports possess market power in key aeronautical services. In this chapter, the possible pricing and other behaviour of these airports, were they to operate without price regulation, is considered, along with potential efficiency and distributional effects of such behaviour. In particular, aspects of the commercial environment in which airports operate that are likely to influence their conduct, are explored. Inevitably, because of the lack of examples of unregulated, privatised major airports in Australia and worldwide, any conclusions involve judgements. Nonetheless, an exploration of these issues is prerequisite to an assessment of whether continued price regulation is needed to prevent airports with market power exercising that power.

Section 7.1 considers the effect of non-aeronautical revenues on aeronautical pricing and investment, incentives for airports to cooperate with other providers in the supply chain and incentives to discriminate in pricing. Also discussed is the possible countervailing power of airlines in their dealings with airports. Section 7.2 draws together analysis in chapters 5 and 6 and section 7.1 to assess the likely conduct of major airports if airport-specific price regulation were removed and the efficiency and distributional effects of such conduct.

7.1 Influences on unregulated airport pricing

The pricing behaviour of major unregulated major airports will be influenced by a number of factors. These include their increasing reliance on non-aeronautical revenues, demand uncertainty, and the scope for countervailing power of major airline customers. The ability of, and incentives for, airports to discriminate in pricing may also be important.

Non-aeronautical revenues and aeronautical pricing

Revenues from duty-free shopping and other retailing, car parking and property developments are a large and increasing part of airport revenues. Table 7.1

compares average earnings per passenger movement[1] (before abnormals, interest, tax, depreciation and amortisation (EBITDA)) from non-aeronautical activities and aeronautical activities at core-regulated airports for 1999-00.[2] As noted in chapter 2, some differences between airports reflect different organisational arrangements, and non-aeronautical revenue for all core-regulated airports includes lease payments received for domestic terminals operated by airlines.

Table 7.1 **Earnings before abnormals, interest, tax, depreciation and amortisation (EBITDA), aeronautical and non-aeronautical services at core-regulated airports, 1999-00**

Airport	*Passenger movements '000*	*EBITDA $000*		*EBITDA per passenger $*	
		Aero	*Non-aero*	*Aero*	*Non-aero*
Sydney	23 097	40 703	147 010	1.76	6.36
Melbourne	15 138	30 348	89 967	2.00	5.94
Brisbane	10 532	15 178	75 837	1.44	7.20
Perth	4 890	8 293	37 321	1.70	7.63
Adelaide	4 201	3 487	30 518	0.83	7.26
Canberra	1 969	1 122	5 119	0.57	2.60
Coolangatta	1 959	5 568	na	2.84	na
Darwin	1 080	306	4 388	0.28	4.06
Hobart	909	1 321	1 244	1.45	1.37
Alice Springs	781	183	1 671	0.23	2.14
Townsville	682	297	2 368	0.44	3.47
Launceston	542	443	1 609	0.82	2.97

Sources: ACCC (2001b–f; sub. 36, attachment A). **na** Not available.

For all core-regulated airports, except Hobart, non-aeronautical earnings exceeded aeronautical earnings by a significant margin (non-aeronautical earnings for Coolangatta are unavailable). Airports with substantial international passenger movements (Sydney, Melbourne, Brisbane, Perth and Adelaide), on average (unweighted), earned about $6.90 per passenger from non-aeronautical activities compared with $1.55 from aeronautical services. This compares with $2.75[3] and

1 Passenger movements include international, domestic and regional passengers. Because of different spending patterns and differences in the provision of commercial services for different passenger groups (eg airports do not earn revenue from retail services provided in domestic terminals leased by major airlines), average non-aeronautical earnings per passenger is unlikely to provide an accurate estimate of average earnings from different passenger groups.

2 These estimates differ somewhat from operating profits presented in chapter 2 because depreciation typically is proportionately lower for non-aeronautical services.

3 Does not include non-aeronautical revenue per passenger from Coolangatta Airport.

$1.05 respectively for the smaller core-regulated airports, without significant (or any) international traffic.

As discussed in appendix C, provided non-aeronautical earnings are directly linked at the margin to passenger traffic growth and the price elasticity of demand for aeronautical services is not zero, airports will have an incentive to encourage additional passenger throughput (and therefore increase their profits) by reducing aeronautical charges below what they would be without the non-aeronautical services. This point was acknowledged by the Board of Airline Representatives of Australia (BARA):

> The interdependencies combined with the economic rents achieved on non-core airport services acts to limit the likely increase in the charges for core airport services in the absence of effective regulation. (sub. 41, p. 15)

In similar vein, the (UK) Civil Aviation Authority (CAA) has observed:

> … the airport itself has incentives to set aeronautical prices to reflect demand complementarities. Where complementarities are important … the airport will have strong incentives to set low aeronautical charges in any case (particularly if they are able to price differentiate effectively). Therefore any potential loss of economic efficiency is likely to be substantially reduced, and needs to be set against the presumption that scope of economic regulation should not be unnecessarily wide unless the efficiency arguments in favour are compelling. (CAA 2000f, p. 17)

Moreover, provided profits from non-aeronautical services reflect locational rents rather than monopoly profits, overall economic efficiency generally will be enhanced by such pricing — locational rents earned in non-aeronautical activities create no efficiency distortion while lower aeronautical charges will reduce any efficiency cost arising from the exercise of airport market power.[4]

As observed by Starkie:

> … for a profit-maximising airport company with market power, the effect of the demand complementarities linked to the locational rents, is to attenuate the normal, downward pressure on profits that arises when increased air traffic volumes are at the expense of lower prices for the use of runways and terminals … In other words, airports have good reason to limit the extent to which they exploit market power. (Starkie 2001a)

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4 To the extent that profits from non-aeronautical activities are monopoly profits, the efficiency loss arising from monopoly pricing in these activities must be balanced against any efficiency gain from reducing aeronautical charges. However, as discussed in chapter 6, evidence suggests that, for most activities classified as non-aeronautical, the degree of market power held by the airport is likely to be low. It should also be noted that, because economic efficiency can be enhanced by complementary pricing of aeronautical services, this does not imply that single-till regulation which, at the limit, involves a transfer of all locational rents, must also promote efficiency further (appendix C).

In a sense, in Tretheway's words (Tretheway 1996), the airline 'customer' also becomes a 'partner' of the airport. Whether, as a result, average aeronautical charges remain above their stand-alone, cost-recovering level or fall below it (towards marginal cost) will depend on the size of marginal, non-aeronautical net revenues, relative to the airport's profit-maximising, stand-alone aeronautical price.

While the data in table 7.1 indicate the significance of non-aeronautical earnings to airport operators, in order to gauge possible implications for unregulated aeronautical pricing, several qualifications are in order:

- the earnings per passenger reported are average, rather than marginal net earnings. Though some non-aeronautical revenues are raised in a way that is directly related to additional passenger throughput (for example, retail concession fees), some are not. Hence, average non-aeronautical earnings may overestimate marginal earnings per passenger;
- the classification of earnings into aeronautical and non-aeronautical reflects current regulatory arrangements. For example, estimates of non-aeronautical earnings include lease payments for the space occupied by domestic terminals operated by airlines. If these terminals were operated by the airports, terminal charges would be classified as aeronautical revenues. In addition, some aeronautical-related revenues included in these non-aeronautical estimates may contain elements of monopoly rents though, as discussed in chapter 6, market power in most non-aeronautical activities appears to be low; and
- some fixed costs may be included in cost estimates. This would mean that reported average earnings will tend to underestimate marginal earnings. On the other hand, some costs excluded from EBITDA calculations may be marginal costs (for example, some depreciation).

Nonetheless, given the magnitude of these largely passenger-related profits, it seems reasonable to conclude that the incentive for unregulated airports to increase aeronautical charges is likely to be dampened, though it is difficult to be precise about the magnitude of this depressing effect.

BARA (sub. 41) observed that, even with this effect, in the absence of price regulation, aeronautical prices are likely to be significantly higher than current levels. As discussed in chapter 8, current prices at privatised core-regulated airports still largely reflect historical single-till pricing by the Federal Airports Corporation (FAC). Thus, though prices might rise in the absence of the current pricing constraints, the relevant test is by how much unregulated prices will exceed efficient prices, not historic prices.

That said, not all passenger groups are likely to be equally profitable for an airport. Earnings per passenger would appear to be much higher for international passenger movements than for domestic movements because of duty-free shopping and also because airports do not operate domestic terminals leased to major airlines. While details of earnings from particular activities generally are not available, average revenues from retail sales and car parking per international passenger at Sydney Airport are reported to be $13.65 and $2.19 respectively; domestic passengers are reported to spend around an average of $1.46 per passenger on car parking (Chanticleer 2001). The airport will have an incentive to target aeronautical price reductions to the more profitable passenger groups. (Tretheway (1996) notes that Vancouver Airport linked into airline loyalty programs, awarding frequent flier points to car parkers.)

An airport also will have an incentive to give price discounts only to marginal flights/passengers. However, there may be limits to such targeting. For example, an airline might substitute 'new' flights for existing ones, and while airports can distinguish between international and domestic flights and between airlines, their capacity to target passengers more finely may be limited (especially if charges continue to be levied on a maximum aircraft weight basis).

Where an airport is highly congested, or price sensitivity of demand for aeronautical services is very low, an airport will have little incentive to reduce aeronautical charges because this merely would reduce profits. Sydney Airport appears to be congested, at least for several hours a day. Even so, Sydney Airport offers discounts to 'new' off-peak services (SACL, sub. 27).

If passengers are relatively more sensitive to quality than price, an airport might attempt to attract passengers (and airlines) by improving quality. For example, they may use non-aeronautical earnings to finance capacity- and quality-enhancing aeronautical investments (which, in turn, generate more non-aeronautical revenues). Melbourne Airport commented that 'high levels of customer satisfaction drive greater turnover of discretionary expenditure in airports and this is highly profitable' (sub. 7, p. 9).

In addition to off-peak discounts at Sydney Airport, the Commission understands that several core-regulated airports have offered assistance (pecuniary and non-pecuniary) both to domestic and international carriers to increase scheduled flights. Kuala Lumpur International Airport is reported to have waived landing and take-off fees for flights with more than a 25 per cent load factor to boost traffic (Cheesman 2001).

Melbourne Airport advised that it had provided assistance for market development for airlines because such development is regarded as a barrier to entry for new

(international) carriers (sub. 7). However, given current caps on aeronautical prices (under which prices continue largely to reflect historical FAC single-till pricing), scope for general aeronautical price reductions is likely to be limited. Airports also may be disinclined to reveal discounts because of:

- the impact on their commercial relations with other airlines;
- a concern that being seen to be pricing below the cap for some users might lead to a regulator setting an even tougher cap in subsequent regulatory periods; and
- commitments regarding non-discrimination for international carriers.

DRAFT FINDING 7.1

Profits from non-aeronautical activities at most core-regulated airports appear significant, especially when compared with current earnings from regulated aeronautical charges. Though this earnings disparity might be expected to narrow somewhat if price regulation of aeronautical services were removed, there is an incentive for airports to temper prices (particularly prices for new-entrants) for aeronautical services, improve quality and/or increase aeronautical capacity in order to encourage passenger growth.

Demand uncertainty and supply-chain linkages

Demand for a particular airport's services is derived from the demand for air travel to that destination which, in turn, is an input into business meetings, holidays, family visits etc to that destination/region. Airports therefore are susceptible to changes in the relative attractiveness of the community and region they serve. Thus, though airports' market power, to a large extent, relies on the relatively small effect of an increase in airport charges on ticket prices, as small links in a very long supply chain, airports may have some incentives to cooperate with other providers (for example, in the tourism and aviation industries) especially when this is likely to reduce demand uncertainty.

For airports that serve very large population centres and a variety of market segments (for example, business, domestic and international air travel), the effects of a downturn in one market segment might be cushioned by other, more resilient, segments. Nonetheless, as discussed above, large capital city airports appear to derive significant profits from spending on non-aeronautical services by international tourists especially, and could be vulnerable to any reduction in that particular market segment. For some smaller airports, heavily reliant on inbound tourism, for example, a shift in consumer tastes could have even more severe consequences for the airport.

By itself, an airport can do little to prevent a substantial shift in preferences — even zero landing charges are likely to have little effect in this instance because the shift in the demand curve would dominate any movement along it in response to lower airport charges. An airport can, however, work with local tourism authorities and other input providers, including airlines, to promote and improve the attractiveness of the city/region in which it is located, with a view to reducing demand uncertainty.

Melbourne Airport commented that it 'has been in active partnership with successive Victorian Governments in developing markets both to and from Melbourne' (sub. 7, p. 12). Hobart Airport observed:

> The privatisation of the airports has, to a significant degree, promoted the commercial reality that there is an inter-relationship and reliance that needs to be fostered between government infrastructure, transport and tourism agencies, tourism operators, the airlines and AOCs [Airport Operator Companies]. (sub. 11, p. 1)

In similar vein, Australian Airports (Townsville) commented that it:

> … is a small private company which focuses on providing quality services at a low cost whilst returning value to the company and its shareholders. Its approach to competition *vis a vis* other airports is directed at supporting its local business community in attracting new development to the region. In that regard we offer a service that is priced below the 'competition' and to that extent should support local community economic goals. (sub. 14, p. 14)

To the extent that airports seek to cooperate with others in the supply chain, and governments, to encourage increased tourism and air travel, it is unlikely they would want to be seen to be setting very high airport charges. Such charging also would appear inconsistent with a medium- to long-term growth strategy. The Motor Trades Association of Australia Superannuation Fund (MTAA Super Fund) observed:

> A catch-phrase might be 'airports do not compete, *destinations* compete'. A city such as Brisbane, bidding to host a major conference or event is pitting its package of airport, hotels, conference facilities and entertainment against the packages from competing destinations, not only in Australia but around the globe. The airport, as a facilitator of tourism and trade must remain competitive to ensure success. (sub. 22, p. 36)

Of course, some airports might consider their long-term growth potential to be immutable. In these circumstances, whether the outlook is optimistic or pessimistic, they will have little incentive to cooperate with other providers or to temper their pricing today with a view to longer-term pay-offs.

Countervailing power of airport users

Regardless of the extent of market power possessed by airport operators, some airport customers, either individually or as a group, have a degree of negotiating power with some airports. In principle, the outcome of dealings between two parties with market power is indeterminate *ex ante*, but to the extent an airline or other airport user were able to place pressure on an airport to price at a level more consistent with efficient prices, economic efficiency would be enhanced.

This issue has elicited diverging views from inquiry participants. On the one hand, several airport operators have argued that airlines possess significant market buying power. On the other, airlines have submitted that the absence of alternatives has meant that they have little ability to influence prices of aeronautical services.

According to Adelaide Airport Limited (AAL):

> Adelaide Airport Limited is not able to abuse any market power that it may have in the domestic market as AAL's main customers, Qantas and Ansett, hold significant countervailing market power. Put simply, Qantas and Ansett are much more important for Adelaide Airport than Adelaide Airport is for Qantas and Ansett. (sub. 20, p. 1)

Australian Airports (Townsville) argued that smaller airports were particularly disadvantaged in negotiating with airlines:

> In addressing this matter it is important to identify where the balance of power is. AAL [Australian Airports (Townsville)] believes that the balance of power is with airlines by virtue of their size relative to most Australian airports and especially small regional airports. (sub. 14, p. 17)

Similarly, Capital Airport Group (Canberra Airport) cited its difficulties in negotiating agreements with Ansett and Qantas as an example of the airlines' countervailing power (trans., pp. 299–301).

Airlines presented a contrary view. In BARA's view 'airlines have little or no economic countervailing power when negotiating over airport charges' (sub. 41, p. 16). BARA continued:

> The primary determinant of the relative bargaining strengths of the parties is the value of their outside options. That is, the difference between the profits each party will achieve with and without the transaction being completed.
>
> International airlines make significant investments in developing international routes. A decision by an international airline to commence services to and from Australia and to and from a particular city in Australia involves significant investments. For example, airlines incur costs in identifying a new market opportunity and establishing the business case to fly there, dealing with regulatory requirements, establishing a physical presence which involves establishing offices and recruiting and deploying staff, establishing a sales and distribution network, and promoting the new route. Airlines

> usually incur losses in the early period of the new route's existence, in the expectation that these costs will be recouped as the route's popularity grows. Many of these costs are unrecoverable if the airline decides to discontinue the service. (sub. 41, p. 16)

Qantas Airways (trans., p. 262 and sub. 48) and Ansett (sub. 42) made similar claims, with which Professor Forsyth agreed:

> Essentially, to run the countervailing power argument, the user has to have a good alternative to the product on offer, so if Ansett wants to fly into Melbourne, to have countervailing power it has to have a very good alternative that it can switch to fairly readily and that's usually not the case in Australia. It can be the case in Europe or in parts of the US but not in most parts of Australia. (trans., p. 59)

The nature of countervailing power in the airports sector

Countervailing power is the ability of a buyer or buyers to constrain the prices of a seller with market power to less than would be charged if buyers were 'small' and uncoordinated.

There are several means by which large users might influence pricing decisions. The main economic weapon for large buyers will be the withdrawal or threat of withdrawal of part or all of their demand for the seller's product. Exercising countervailing power essentially involves game playing between the protagonists and requires the ability to undertake or threaten short-term, non-profit-maximising behaviour (that is, the profits forgone by not engaging in potentially profitable trades) in the expectation that this will deliver a more profitable, long-term outcome (a better price or service).

However, in addition to economic power, in Australia and overseas, large airlines or airline alliances or associations have used their political influence and recourse to the legal system to influence pricing by airports. (See Toms (1994) for a discussion of airlines' responses to the introduction of peak charges at Heathrow Airport.) In regard to dealing with Qantas and Ansett, Westralia Airports Corporation (Perth Airport) stated:

> They have a far greater capacity and a preparedness to be able to take on legal action against us if they feel that there is an incentive at the end of it for them, whereas our shareholders have limited levels of resources and the ability to be able to counter those significant legal actions is certainly constrained at Perth Airport. (trans., p. 325)

However, it is important to recognise that any economic, political or legal power provided to airport users by the current regulatory framework should not be considered in assessing the extent of *underlying* market and countervailing power in Australian airport markets. The extent of countervailing power in the absence of

price regulation is the relevant starting point when assessing the appropriate degree of airport regulation.

Aeronautical services

Aeronautical services, the area in which airports are most likely to have potential market power, are also the services where airports face the most concentrated, and financially-powerful, users. Nonetheless, as noted by Professor King:

> The existence of a single significant buyer does not automatically create countervailing power … To determine if countervailing power is relevant, the analyst needs to consider the bargaining position of buyers and sellers. In particular, it is important to consider which parties will lose most from any failure to reach an agreement to trade the relevant product. For countervailing power to exist in a market that otherwise is deficient in competition, any losses from a break-down in bargaining need to be predominantly borne by the seller. (ACCC, sub. 36, attachment C, p. 13).

There are several indicators as to the relative strengths of the bargaining positions of airlines and particular airports. These include:

- the options available to airlines and airports in a particular situation. If there are other airlines ready to enter routes that become vacant then countervailing power will be weak. If there are few alternative airlines (or, more precisely, no airlines that could quickly slot into a vacated route) then existing airline operators will be in a stronger position to exercise countervailing power;
- the profitability of routes to airlines. If routes are known to be marginally profitable, threats of withdrawal may be more credible, particularly, if those flights are relatively more profitable to the airports (for example, due to related, non-aeronautical revenues). On the other hand, where routes are known to be profitable (for example, due to strong business demand), the airport will be in a stronger position;
- the impact of any reductions in demand on airport profitability. Because airports have high fixed costs in runways and terminals, their profitability will be particularly sensitive to changes in demand. On the other hand, much of the fixed assets of airlines can be moved to other routes or sold. (Nonetheless, both BARA (sub. 41) and MTAA Super Fund (sub. 22) observed that airlines incur substantial sunk costs when establishing new routes which act as a barrier to entry and exit.) In addition, fewer flights and lower passenger (and/or freight) throughput may reduce airport profits from non-aeronautical sources. While the airport will take non-aeronautical profits into account when setting its aeronautical prices, an airline might be able to target withdrawal of particularly profitable services to the airport (for example, departing international flights, cargo/maintenance facilities) as leverage to gain further price reductions; and

- the relative size and financial position of the two organisations and their shareholders. The party best able to sustain short-term loss-making behaviour will be in a more advantageous position.

One difficulty in assessing the extent of airlines' countervailing power is that there is no history, under private ownership, of unregulated operation of major Australian airports and there are few, lightly-regulated, private, overseas airports. The experience of regulation of airports in New Zealand, a regime that was to a large extent predicated on a view that airlines possessed countervailing power sufficient to offset market power of airports, provides some insights (box 7.1).

In Australia, aeronautical charges since privatisation have been constrained by the regulatory framework. In opposing increases in aeronautical prices, airlines generally have operated within this framework rather than exercising any countervailing buying power that they might possess. The form of commercial relationships between airports and airlines is evolving slowly from the earlier model of a government authority dealing with a protected domestic airline duopoly.

Some participants (for example, Forsyth, sub. 5) suggested that significant price rises at Sydney Airport ('not disapproved' by the ACCC in April 2001) confirmed the absence of airline countervailing power. However:

- these price increases were coming off a very low base of FAC single-till prices (chapter 8); and
- the price increases were 'not disapproved' by the regulator after a lengthy consultation process. This regulatory process — if not all its outcomes — generally is supported by airlines.

It also is questionable if market and countervailing power are relevant at Sydney Airport, given that, for significant periods each day, there is excess demand for slots. Even with the new price increases, prices at these peak periods are likely to be at levels well short of market-clearing levels.

In these circumstances, it clearly would not be credible for an airline to threaten withdrawal of a service for which it held a valuable slot allocation. But nor is it likely that Sydney Airport would have an incentive to increase prices beyond market-clearing levels. Though the value of slots will decline somewhat as airport charges increase, airlines (rather than their passengers) will continue to be major beneficiaries of scarcity rents.

The Commission has received fragmentary evidence about the exercise of countervailing power from both airlines and airports, much of it on a confidential basis. Mostly the submissions appear to describe tough commercial negotiations.

Box 7.1 **Airline countervailing power and New Zealand airports**

The ability of airlines to counteract any market power held by airports has been a key assumption underpinning the New Zealand approach to the economic regulation of airports. New Zealand adopted a 'light-handed' approach that did not involve direct economic regulation of airport operators, but rather used indirect measures with the aim of facilitating negotiated outcomes between airlines and airport operators (without the need for direct involvement of government). In broad terms, the approach relies upon:

- the countervailing power of airlines to counteract any market power held by airports;
- airports adhering to legislated consultation and disclosure provisions in negotiations with airlines (as a means of facilitating the exercise of airlines' countervailing power); and
- the threat of direct economic regulation, should airports abuse any market power, to act as a constraint on pricing.

In practice, airlines have often attempted to resolve consultation and pricing disagreements with airports through court action. The high incidence of litigation between airports and airlines has been cited as evidence of the lack of countervailing power of airlines as, it has been argued, airlines faced with increased airport charges have had little other recourse available to them than to resort to litigation (PSA 1995). However, the regulatory regime itself may have promoted the use of litigation over commercial negotiation.

The New Zealand Commerce Commission (CC), in its current review of the New Zealand regulatory model, concluded that 'neither Auckland, Wellington or Christchurch international airport are likely to be significantly constrained by the countervailing power of airlines' (CC 2001b, p. 77). Countervailing power of airlines at these airports was considered to be constrained because, unlike smaller regional airports, the airports are unlikely to depend on a small number of airlines for their business. Nonetheless, the CC also reported that 'the major airlines have demonstrated a willingness to withhold airport payments and to consider court action' (CC 2001b, p. 76).

The New Zealand approach to regulation is discussed in more detail in appendix G.

Sources: Appendix G; CC (2001b, pp. 74–7).

Melbourne Airport (sub. 37) outlined some examples of 'hard bargaining' between airlines and airports and presented analysis to demonstrate that an hypothetical 10 per cent reduction in services to Melbourne Airport by Qantas, would reduce the airport's operating profit by around 10 per cent, but the airline's by a mere 0.4 per cent. However, this ignores scope for other airlines to replace some or all of

the services withdrawn by Qantas. In short, Melbourne Airport's potential losses appear likely to have been significantly over-estimated in the example provided.[5]

Airports likely to be more vulnerable to countervailing power of airlines are those that rely on market segments where inter-airport competition is stronger. In these circumstances, the airline will have a credible threat to switch some services to another airport. Of course, such substitution possibilities also will be reflected in demand for an airport's services, but a dominant airport customer may be able to do even better by threatening to withdraw a bloc of services.

Smaller airports reliant on one or two major airline customers also may be in a relatively weak bargaining position if a customer threatened to withhold payment for a period. While an airport could take legal action and, after meeting certain requirements under the terms of their leases (chapter 3), eventually refuse access to a debtor airline, it could experience a quite severe cash-flow crisis in the meantime, as well as incur substantial legal costs. On this point, Professor King noted that:

> … [countervailing] power may be increased if the airport itself cannot credibly reduce its output; for example, if the airport is credit constrained and potentially faces cash-flow problems. (sub. 36, attachment C, p. 13)

The larger core-regulated airports (Sydney, Melbourne and Brisbane) are particularly significant to airline networks and hence appear in a stronger position for most market segments. Nonetheless, in the international market, the scope for airlines to shift some of their traffic between Australian airports may provide a degree of bargaining power. The growing importance of airline alliances and code-sharing agreements may also enhance airline bargaining power, though member airlines compete within alliances, and alliances compete with each other.

Airline negotiating power also is likely to be enhanced by non-aeronautical revenues earned by airports — airlines feasibly could threaten to withdraw marginal flights that delivered high profits to airports in order to obtain lower across-the-board charges. This may be assisted by airline knowledge of airport revenues. Melbourne Airport commented:

> This is also a game in which there is significant information asymmetry. The airline will have a good idea about how much it contributes to the airport in terms of direct income and may even have some knowledge about the passenger based income derived from retailing, car parks and so on and can be confident that marginal airport costs are low … On the other hand, airports have little information about the economics of

[5] Replacement would tend to occur unless: the services were not profitable for any airline; or though somewhat profitable to Qantas, the services were far less profitable for any other airline (for example, because of networking differences); or Qantas had re-routed the passenger traffic through another airport and passengers were willing to accept this (thereby reducing scope for another airline to replace the service).

> individual airline routes. Indeed, it is unlikely that an airport would even know what the next most profitable route was, let alone its profitability. (sub. 37, p. 11)

Airlines also could use the threat to locate discretionary infrastructure (such as engineering and maintenance facilities) elsewhere as a bargaining chip to extract lower aeronautical charges. However, as noted by BARA (sub. 41), this strategy can be used only occasionally, and then only on an *ex ante* basis — once a facility has been built, the airline is locked in to using that facility at the airport and relative bargaining positions can reverse. However, an airline could lock in lower aeronautical charges via a long-term contract.

A similar point was made by Qantas:

> It has also been suggested that airlines may be able to exert countervailing power through bundling the acquisition of services that are contestable, with services that are not. For example, it has been suggested that airlines might bundle the acquisition of services for heavy maintenance facilities with other airport services. It is suggested that through such bundling, airlines might negotiate better terms and conditions (including price) on the other airport services. Qantas submits that this proposition is unrealistic. Qantas' existing heavy maintenance facilities represent sunk investments. Qantas cannot and does not relocate its heavy maintenance facilities on frequent occasions. Investment in future heavy maintenance facilities is infrequent and lumpy. Accordingly, it provides little or no opportunity to bundle such services together with other airport services. Such bundling is simply not a practical consideration for Qantas in the conduct of its business. (sub. 48, p. 12)

Other services

Airport operators lease rental space to specialist retailers who then provide retail services (including food and beverages) to airline passengers and others visiting the airport. The large number of individual retailers and retail chains that might seek these leases suggest that there is little power of large buyers in this sector. That said, it is possible that some retail chains may offer goods and services that passengers value highly. In this case, the airport might seek out these retailers in which case the latter may have some negotiating power.

At any rate, as discussed in chapter 6, airports appear to possess little market power in retail services — the main power of airport retail lessees and their customers is provided by competition in the retail services market. A broadly similar situation applies to car parking. Melbourne Airport argued:

> … airports are unlikely to have significant market power in relation to services provided to non-airline users and as such, a discussion of countervailing power is not particularly relevant. (sub. 7, p. 16)

Several airports have introduced charges for taxi operators picking up passengers at airports (appendix E). The Australian Taxi Association stated:

> The economic strength of the airport operators is further reinforced by the taxi industry being an atomised operation. As a result of this fragmented nature of our industry it is difficult to conceive of the taxi industry withholding supply, almost regardless of the level of ground facility fees charged by airport operators. (sub. 4, p. 8)

As taxi drivers are organised at the state and national level and operate under the auspices of a few large companies, they would seem to have a degree of economic and political power to countervail market power airports may have with regard to taxi charges. The strong and effective bargaining of Melbourne taxi drivers in response to proposals for an airport levy on taxis using airport holding facilities indicates a degree of countervailing power in this area (appendix E).

DRAFT FINDING 7.2

Airlines' countervailing power against airports appears limited. However:

- *differences in airline network structures, combined with scope for airport substitution in some locations and for some market segments;*
- *the ability of airlines to threaten selected reduction of services that deliver relatively high returns to airports; and*
- *the superior commercial strength of major airlines relative to smaller airports, in particular*

suggest that airlines do possess a degree of countervailing power, though this will differ from airport to airport.

Price discrimination and airport price structures

If airports with market power effectively can charge different prices for different customers, the efficiency effects of exercising market power are likely to be reduced. Moreover, an airport with market power will have a strong incentive to discriminate in its pricing — with price discrimination it will supply more and earn higher profits.

As discussed in chapter 4, price discrimination by firms with decreasing average costs allows common, fixed costs to be fully recouped without discouraging marginal purchases (and/or purchasers). Fully-efficient price discrimination requires that each consumer pays a price equal to marginal valuation for the last unit

purchased by that consumer.[6] Though such fine discrimination is not feasible in practice, to the extent broad groups of consumers with different elasticities of demand can be identified and kept separate, those with higher elasticities can be offered a lower price.

As with countervailing power, this issue has brought forth contradictory evidence. The ACCC, for instance, concluded that:

> … if airports are in a position to price discriminate between different customers, the allocative efficiency losses resulting from monopoly pricing might be mitigated. At the limit, if they were able to perfectly price discriminate, the deadweight welfare losses to society could be eliminated altogether.
>
> However, the Commission considers this irrelevant given practical realities. The evidence to date suggests that airlines and airports have little capacity to price discriminate in relation to aeronautical services … Furthermore even if they could, the information requirements to enable such pricing behaviour are likely to be extremely high. (sub. 36, p. 7)

On the other hand, Professor Forsyth argued that:

> If it is not a busy airport, it will charge high price levels, but the dead-weight losses from these high charges will be minimised since it will be able to implement a very effective form of price discrimination, through size or weight related charging. (sub. 5, p. 17)

This latter view seems to reflect the prevailing view of most airport analysts (see Doganis 1992). Traditionally, airports have levied landing charges on the basis of maximum take-off weight (MTOW) of aircraft. Thus a heavier aircraft pays more to land than a lighter one. The critical point is that aircraft weight per passenger tends to increase with plane gauge — for example, according to the MTAA Super Fund 'a B737 or an A320 has around 1.5 passengers per tonne (at an 80% load factor), whereas a B767 has around 1.0 passenger per tonne at similar loads' (sub. 22, p. 26). Thus average airport charges per passenger tend to be higher for larger planes.[7]

Add to this the likelihood that larger planes ply long-distance routes, with passengers paying correspondingly higher fares, and MTOW-based charges roughly assume the properties of so-called Ramsey pricing. That is, airport charges will be

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6 Perfect price discrimination, in the sense that all consumer surplus is captured, is not required for efficiency. Efficiency requires that marginal sales are not forgone.

7 To some extent this may reflect the higher costs imposed on the airport by larger planes though Doganis (1992) concluded that the relationship between weight-based charges and airport costs is indirect at best. Of course, to the extent that airport charges do reflect costs, this will promote efficient use of the airport. But an airport with market power will seek to earn above-normal profits by pricing above costs.

levied in inverse proportion to the price elasticity of demand, assuming the price elasticity of demand for airport services is inversely related to the amount of the fare.[8] This is not to suggest that such price discrimination will be perfect — larger planes (for example, B747s) may ply relatively low fare, short routes, though this does not appear to be the case in Australia.

Moreover, not all passengers on a flight pay the same fare. Although the airport is unable to discriminate between passengers on individual flights, that task is likely to be performed reasonably efficiently by airlines. A landing charge levied per aircraft will be treated as a fixed cost (given a decision to make the flight) by airlines, to be allocated across passengers in a way that reduces the (discouraging) effect on the marginal fare-paying passenger. Thus, as observed by the MTAA Super Fund:

> Airlines have a revenue target to raise in order to cover the direct costs of each flight — a preferred contribution towards overheads and a return on capital. To meet this target, airlines use yield management to extract the necessary revenue in the most efficient manner. Business class and full economy fares cover much of the fixed costs of airline operations, with discount leisure fares covering marginal costs and only a small contribution to fixed costs. This is a standard Ramsey pricing scenario … Airlines recover proportionally more from the relatively more price-inelastic demands.
>
> Airlines' pricing strategies, and their pattern of recovery of fixed costs, mean airport charges are a similar percentage for each fare class and a smaller absolute amount in discount economy fares. It is therefore incorrect to depict changes in airport charges as applying uniformly across all passengers, implying a greater proportional impact on lower fares … Aeronautical charges also have more of the characteristics of fixed costs than variable costs, and any changes will therefore likely be passed on more to higher fare paying passengers. The proportional impact on discount airfares will be smaller as a consequence. (sub. 22, p. 31)

As discussed above, airports also appear to offer low entry prices or direct assistance to new airlines and new services offered by incumbent airlines. Such incentives are not provided because of current regulatory arrangements and suggests that an airport has both the incentive and a reasonable ability to target marginal users.

DRAFT FINDING 7.3

The ability of airlines to discriminate in pricing in a quite sophisticated manner, coupled with aircraft weight-based charges levied by most airports, and low entry prices for marginal flights and new airlines, may reduce the efficiency impact of airport charges set above marginal cost, whether or not these charges are above efficient cost-recovery levels.

8 All else given, the greater the airfare, the smaller will be airport charges as a proportion of that fare, and hence the smaller the price elasticity of demand for airport services (chapter 5).

Passenger-based charges

Though most core-regulated airports have continued to levy landing charges on a MTOW basis, several have introduced international and domestic common-user terminal charges on a per passenger basis (chapter 2, table 2.3). As in the case of Sydney Airport (chapter 8), introduction of passenger-based charging for terminal use may reflect a view that terminal costs are more directly related to passenger numbers than aircraft weight. Passenger charges may provide better price signals to users and providers of terminals about the need for new investment. Nonetheless, there would appear to be much less scope for airports to discriminate between passengers than between planes (though there may still be scope for discrimination between passengers travelling on different airlines).

This apparent shift towards passenger-based charging for terminal use also may reflect the increasing importance of non-aeronautical revenues to airports based on passenger throughput — a per passenger charge provides them with data on passenger flows, by airline, and thus scope for encouraging more profitable passenger loads. Tretheway has suggested that 'passenger-based airport pricing also creates incentives for airports to work in greater partnership with air carriers in stimulating primary passenger demand' (Tretheway 1996, p. 40), while reducing the risks imposed on airlines by weight-based charging (because of reduced demand and lower load factors during economic downturns).

The Commission would welcome comments from participants about the rationale for passenger-based charging by airports and its likely ramifications for airfares and efficiency.

Pricing at congested airports

This section deals with a situation where capacity is constrained by exogenous forces (for example, legislated aircraft movement limits at Sydney Airport). The incentive for an airport to create scarcity by delaying investment is discussed in section 7.2 below.

Weight-based charging is unlikely to be efficient at congested airports, where access to slots (landing and take-off times) must be rationed. In order to increase profits — in this case, scarcity rents rather than monopoly profits per se — a capacity-constrained airport that is not subject to price regulation will tend to move away from weight-based charges towards time-based charging of the scarce

services. Thus, runway congestion may be rationed by higher slot prices at peak times.[9] As noted by Professor Forsyth:

> … where weight based charges are levied at busy, capacity constrained airports, an inefficient pattern of use is encouraged, because low value users are not rationed away in favour of high value users. This happens at Sydney and London Heathrow airports. (sub. 5, p. 14)

Thus, when capacity is constrained, *efficiency* is served by allowing those with the highest valuations to access the facility and effectively denying access to those with low valuations. Whether the resulting allocation would promote distributional objectives of the government is another matter.

A capacity-constrained airport (not subject to price regulation) would have an incentive to introduce congestion pricing, the incentive being the scope to extract scarcity rents (chapter 4).

Some participants have disputed that price rationing of excess demand for slots at Sydney Airport would promote efficiency, because slots are allocated under a quantity rationing scheme (ACCC, sub. 36). However, leaving aside the issues of the regional ring fence (which guarantees certain slot allocations to regional airlines — see chapter 3, box 3.4) and protection of other regional users (outside the ring fence), there is no guarantee, under the current rationing scheme, that airlines with the highest slot valuations (potentially carrying customers with the highest valuations) obtain rationed slots.[10]

Thus, even if airport prices still fall short of efficient, market-clearing levels, a move towards that level is likely to promote a more efficient allocation of slots because some flights will be replaced by others with higher pay loads (for example, via substitution of larger for smaller planes and withdrawal of marginal flights). Nonetheless, this is unlikely to lead to significantly higher passenger airfares because average fares to Sydney at peak times already largely will reflect the scarcity value of slots, with the rents accruing to airlines holding those slots. That said, however, some passengers travelling on services that are withdrawn or rescheduled to off-peak periods may be worse off. The transfer of scarcity rents

9 What constitutes the peak can be a difficult question, however (SACL, sub. 27).

10 For a given slot allocation, however, an airline will ensure that customers with the highest valuations obtain seats by not offering discounted fares on those flights. While this promotes efficiency, the airlines, rather than the airport or passengers, capture scarcity rents under a slot allocation scheme. It also is possible that an airline will provide some flights in order to obtain/retain a valuable slot (eg by flying smaller planes more frequently). Though the full current value of slots used in this way will not be realised by the airline, such a strategy will reduce slots available to competitors and 'babysit' them for higher value use in the future.

from airlines to airports also could have repercussions for an airline's operations if such scarcity rents were used to cover the fixed costs of services on other routes.

DRAFT FINDING 7.4

At capacity-constrained facilities (where the shortage of capacity is not created or perpetuated by the airport) efficient pricing requires that capacity is rationed such that consumers with higher valuations of the service obtain access. Airports not subject to price regulation generally will have an incentive to price efficiently in these circumstances.

7.2 Conduct of unregulated airports' behaviour: efficiency and distributional effects

As noted in chapter 4, the principal rationale for price regulation of airport services is the potential for monopoly conduct by unregulated airports.

In the light of analysis in chapters 5 and 6, and the preceding sections of this chapter, this section discusses likely pricing and related behaviour of unregulated airports, and efficiency and distributional consequences of such behaviour. As noted at the outset, however, any conclusions necessarily rest on judgements because so few privatised large airports operate in an environment without (or without the threat of) price regulation.

Unregulated airport pricing

Major Australian airports appear to have a degree of market power in core aeronautical services.

In the absence of constraints on airport pricing discussed in preceding sections, there will be an incentive for an airport to use this market power. If it does not discriminate in pricing, an airport will have an incentive to increase prices above marginal (and average) costs, to the point that marginal revenue and marginal cost are equal.

Any such increase in price will reduce consumption of the airport's services, resulting in the familiar monopoly, deadweight efficiency loss (chapter 4, figures 4.1 and 4.2). Airlines and their passengers will pay more for use of the airport's facilities, allowing the airport to earn monopoly profits. (For a capacity-constrained airport, so long as the capacity is fully used, the profits will reflect the scarcity of capacity, not monopoly profits.)

However, in the Commission's view, for reasons discussed in preceding sections of this chapter, the 'traditional' full monopoly pricing is unlikely to occur, even for those airports with market power. These influences are likely either to temper aeronautical price increases and/or their efficiency effects. Further, price discrimination, to the extent it can be exercised, will moderate adverse efficiency effects.

It is likely that, if prices of core-regulated airports were unregulated, aeronautical charges in at least some airports would tend to be higher than current levels. In part this is because there is fairly strong evidence (chapter 8) that current prices are inadequate for efficient, replacement investment (even with current non-aeronautical earnings). Any aeronautical price increases (at uncongested airports) would redistribute surplus from passengers and airlines to airport owners.

DRAFT FINDING 7.5

Aeronautical charges at some airports at least could be expected to rise in the absence of price regulation, in part because current charges will not cover the costs of investment. Whether prices rise above efficient levels, due to exercise of market power, cannot be predicted. However, there appears to be reasonably strong evidence that a range of market influences will moderate the degree of excessive pricing and any negative efficiency effects of such pricing. Chief amongst these are the effects of non-aeronautical earnings and scope for price discrimination so that marginal airport users are not discouraged.

Airport charges above (efficient) costs will redistribute income from airlines and their passengers to airports. The burden of higher charges is likely to fall on both Australian residents and non-residents and relatively more on passengers with inelastic demands (due to price discrimination by airports and airlines).

Additional evidence is sought from participants in relation to draft finding 7.5.

It should be restated that higher prices at congested facilities may not necessarily reflect an abuse of market power (unless, of course, the capacity has been curtailed deliberately by an airport). Efficient prices, in these circumstances, will reflect the (high) opportunity cost of using the scarce facility. However, such pricing will deter customers with a low willingness to pay.

Unregulated airports and productive efficiency

BARA argued that airports with market power, if left unregulated, are likely to operate inefficiently in not watching costs:

> It [monopoly pricing] will also weaken the imperatives for airports to be vigilant over their costs resulting in further economic waste. (sub. 41, p. 1)

BARA continued:

> Competition provides benchmarks enabling owners to more accurately gauge the performance of management. More importantly, competition disciplines poor performance in terms of low returns and exit from the market. In the absence of competition there is scope for productive inefficiencies. Effective regulation, through acting as a surrogate for some of the cost pressures on a firm facing effective competition, can reduce these costs. (sub. 41, p. 30)

Because of the nature of airport supply and demand, there is no competitive benchmark against which to assess an airport's performance. (Indeed, competitive supply — in the sense of many providers — would be a highly inefficient way of providing airport services.)

At issue is the extent to which airport managers will be able to operate inefficiently (and thus reduce potential profits to owners). The airport manager has an incentive to pursue such a strategy to the extent it delivers non-pecuniary benefits including excessive 'perks' and a lower level of effort. Several factors seem relevant:

- given the competitive sale of core-regulated airports, owners will expect managers to deliver at least the returns factored into the bid price. Indeed these performance levels could have been factored into incentive-based contracts with managers. That said, scope for additional profits not factored into the bid price may make the manager's task somewhat easier;
- owners can benchmark an airport's costs and performance against other airports in Australia and overseas; and
- despite limited privatisation of airports internationally, specialist airport management companies have emerged (for example, Aer Rianta, BAA, Hochtief) that offer their expertise worldwide. Such companies could identify an inefficient airport and sell their services to airport owners (several of which are very large fund managers). In other words, there appears to be reasonable competition in the supply of airport management services.

In addition, there is some limited direct competition between airports due to physical proximity and competition for international flights and special airline facilities (for example, maintenance facilities).

It would appear unlikely that managers of a privatised airport with market power would have much scope to relax with regard to costs.

Unregulated airports, quality provision and dynamic efficiency

As noted above, unregulated private monopolies that do not discriminate in pricing have an incentive to restrict supply in order to raise prices. Over time, this would imply that the monopoly will tend to under-invest in order to maintain an artificial scarcity — new investment will occur only when the expected (monopoly) profits from that investment exceed the profits from the existing facility.

If the monopolist can discriminate in pricing, the incentive to under-invest is likely to be reduced. Provided there is demand for the additional supply, and this does not undermine demand and prices for existing supply, the new investment will be profitable.

There may be other pressures on an unregulated airport not to delay investment:

- while congestion may generate higher aeronautical charges, it may adversely affect non-aeronautical revenue, much of which is linked to passenger volumes; and
- if an airport allows high levels of congestion to develop and to remain for lengthy periods (for example, by not building an additional runway), the door may be opened to potential competitors at alternative sites. (Indeed, a monopolist may invest early to pre-empt and ward off potential competition.) Though emergence of a competitor airport in the same location is unlikely, capacity constraints and the curfew at Sydney Airport appear to have worked to the advantage of Melbourne and Brisbane airports, particularly with respect to international traffic. Therefore an airport, that intentionally restricted capacity in order to obtain scarcity rents might risk losing some business to other airports.

Rather than seeking to delay investment, Qantas argued that:

> Airport operators, on the other hand, have an incentive to overbuild and goldplate airport assets, as their primary business is land and infrastructure construction and management. It is therefore vital that regulatory oversight of capital expenditure is maintained. (sub. 48, p. 22)

However, it is difficult to see why a private airport operator (not subject to price regulation but subject to capital market constraints) would incur unnecessary investment expenditure. If increased investment allows an airport with market power to increase its prices, this must reflect increased willingness to pay of at least some users — otherwise prices could have been raised without incurring the extra investment outlay.

Some participants also have expressed concern that airports not subject to price regulation would allow quality levels to deteriorate.

Qantas observed:

> Left unregulated, airport operators can be expected to use their market power through monopoly pricing, diminishing service quality and the imposition of unreasonable terms and conditions of access to the airport. (sub. 48, p. 29)

Quality deterioration might reflect a lack of investment or just cost-saving measures (for example, fewer staff). This essentially is equivalent to arguing that an airport with market power will allow prices to rise for a given level of quality. The extent to which an airport with market power exploits that power by increasing prices and/or reducing quality will depend on the relative quality and price sensitivities of various users.

An unregulated airport with market power may be cautious about allowing service quality to diminish below levels desired by users. At least some passengers and airlines are prepared to pay for quality, particularly for aeronautical services with a safety dimension.[11] Provided those who value quality can be charged for its provision, an airport with market power is likely to provide it.

The link between quality (for example, quick processing and attractive terminal spaces) and non-aeronautical revenues will also play a role. As noted above, Melbourne Airport sees a direct causation between overall airport quality and increased non-aeronautical earnings.

With respect to the likely investment and quality performance of unregulated airports, Professor Forsyth concluded:

> Private monopolies do not necessarily achieve a perfect optimum in their choice on quality level, but there are good reasons to expect that they will choose about the right quality … This will be so because they can convert an increase in quality into additional revenue, since users are prepared to pay higher prices for higher quality. The

[11] Under the terms of their leases and under the *Airports Act 1996*, airports are required to meet certain safety and other standards.

private airport will be willing to make investments which improve the service to users; such as an extension to a runway which lowers the costs faced by users, because these users will be prepared to pay higher prices. (sub. 5, pp. 17–18)

DRAFT FINDING 7.7

Efficiency in airport investment and quality provision largely will mirror the airport's pricing efficiency.

Unregulated airports and access provision

As far as airport access is concerned, the experience of new entrant airlines (Impulse and Virgin Blue) on domestic routes is instructive. Though relations between these airlines and airports have not always been cordial, two airports (Melbourne and Sydney, albeit not unregulated) built new terminals to accommodate the new entrants. At least one airport, the Commission understands, offered start-up assistance.

This behaviour seems to support the view that a privatised, vertically-separated airport will have an interest in expanding its customer base and passenger throughput, a point acknowledged by the ACCC (sub. 36).

Nonetheless, there are circumstances where an airport deliberately might attempt to deny access to an airline or another provider, for example, by imposing high, discriminatory charges.

Qantas claimed that airports had numerous incentives to deny access:

> Even where the airport operator does not conduct a downstream business itself, it may be economically integrated with the downstream business. For example, the airport operator may decide to grant an exclusive lease of a car park to a car park operator. Through its pricing structure, the airport operator may be able to extract all economic profits from the conduct of the single car park. Effectively, the airport operator is economically integrated with the operation of the car park. Furthermore, it may have no incentive to encourage development of additional car parks. It may also decide to deny airlines or other persons the right to conduct their own car parks (for example the valet car parks currently conducted by airlines).
>
> Secondly, the airport may deny access to a specific service to an airport user in order to gain a commercial advantage in other areas of its business. The airport may use the threat of access denial in order to resolve a dispute with the airport user, or achieve a commercial outcome (such as increased prices) in respect of another airport service.
>
> Thirdly, if the airport service is suffering a degree of congestion, the airport may simply find it easier to deny access rather than establish mechanisms to deal with congestion and scheduling problems. In other words, the airport would prefer a 'quiet life'. (sub. 48, p. 25)

The ability of an airport to earn excess profits in any activity at the airport depends on the alternatives available to buyers. An airport therefore may have an incentive to restrict access to its facilities in order to limit competition in the supply of those services where some competition otherwise is feasible. As observed by Qantas, this could occur whether the airport operated directly in the market in question or indirectly by selling rights to others to operate a business on the airport. However, some of the examples cited by Qantas do not appear to relate to denial of access as such.

In the Commission's view, there are three broad scenarios in which an airport operator might seek to deny access:

- where an airport can earn more by 'selling' monopoly access rights to an airline than providing access to all airline entrants at a lower cost. In effect, the airport and the airline would collude in order to monopolise the aviation market (or at least a particular route). In the absence of any scope for monopoly rents to be earned in the aviation market (sufficient to compensate the airport for lost sales), the airport will prefer an open aviation market;
- where an airport can earn more by selling a monopoly right to an on-airport service provider (such as a cargo handler) rather than allowing competition in provision of such services. This scenario also requires the service provider to earn monopoly rents in the relevant market, sufficient to compensate the airport; or
- where an airport provides services directly (or via a licensee), it may earn monopoly profits by denying access (for example, to the airport's 'front door') to potential competitors in that market. For example, an airport effectively may deny or frustrate access to an off-airport, car-park provider in order to earn monopoly profits from its own car-parking operations.

In practice, the first scenario appears less likely to occur than the other two. It relies on the earning of substantial monopoly profits in the aviation market, but that market appears competitive around major airports.

A variant of the first scenario is that a large incumbent airline could threaten to withdraw some of its business from an airport if the latter offered a discriminatory (low) entry price to a new entrant. In this case, the airport is not denying access; it is being prevented from offering access. This scenario also requires the airline rather than the airport to have significant market power, and thus significant buying power.

With regard to the second scenario, though it might be possible to create a monopoly in the supply of cargo-handling services at a particular airport, for

example, this will be limited by the scope for airport substitution (which, in the case of dedicated freight, may be substantial). Nonetheless, there has been an access dispute involving access for freight handling at Sydney and Melbourne airports (chapters 9 and 11). Other ground-handling services also require access to the airport.

The third set of circumstances perhaps describes the most likely access scenario because the airport effectively competes with off-airport providers in certain activities and controls access to the airport. Charging an access fee in excess of costs could allow the airport to raise prices for these potentially competitive services.

Thus, as noted in chapter 6, the conclusion that airport market power in the provision of car parking is likely to be low, is robust only if the airport does not use its control over airport access to stymie competition from off-airport car-park providers or providers of competing transport modes. Denial (or frustration) of access to potential competitors might rely on imposing unacceptable terms of access rather than a prohibitive access price (for example, inconvenient location of the set down/pick up point). The losers in this situation would be off-airport car-park operators, transport providers and passengers.

DRAFT FINDING 7.8

An airport with market power may have some incentive to restrict access to the airport, especially 'front-door' access to off-airport providers of competing services such as car parking, or providers of competing transport modes. However, the exercise of such power is likely to be limited.

8 Assessment of current price regulation: price-cap and price-notification arrangements

Chapter 3 provides details of the current framework for regulating prices charged for airport services at major Australian airports. This framework has been operating since July 1997 for Melbourne, Brisbane and Perth airports and since July 1998 for the other major airports. This chapter and chapter 9 examine the performance of this regime against the criteria of economic and regulatory efficiency outlined in chapter 4, and the specific objectives proposed for the current airports price regulation when it was first established, reiterated in the terms of reference to this inquiry.

Price regulation applied to the eleven privatised, core-regulated airports is considered in sections 8.2 (dealing with the limit placed on aeronautical prices by the CPI-X price cap) and 8.3 (examining price increases allowed above the price cap). Price regulation of Sydney Kingsford Smith Airport (Sydney Airport) is discussed in section 8.4.

8.1 Introduction

The economic regulation framework for privatised core-regulated airports comprises several inter-related elements. These are aimed at preventing abuse of any market power available to airport operators, while encouraging efficient levels of service quality and new investment. If an airport possesses and may use significant market power then the incentives provided by the regulatory framework, if appropriate, can bring forth improved economic outcomes. However, if the regulation were poorly framed or administered it might detract from the performance of an airport with market power or indeed impede the performance of an airport without market power. Airports other than core-regulated airports face no special economic regulation and are subject to the same regulatory environment as other Australian businesses, in particular the *Trade Practices Act 1974*.

The various elements of the price regulation framework need to be considered as an integrated package. It is also important to recognise that the regulatory framework

explicitly was intended to be a transitional one aimed at facilitating the change from airport ownership by a government-owned corporation to the more commercially-focussed environment of private airport ownership.

Chapter 4 has outlined some principles for efficient pricing and good regulation. For price regulation of airports the Commonwealth Government has stressed the dual objectives of protecting users from abuse of market power and the importance of moving towards prices being determined by commercial negotiation between airports and their customers with minimum regulatory involvement (chapter 3).

These objectives recognise the importance of the negotiation process in determining an efficient structure of prices and developing alternative service and cost combinations for customers. The Department of Transport and Regional Development (DoTRD) Pricing Policy Paper (1996) observed:

> The price cap is designed to be as simple and straightforward as possible, in the interests of minimising the costs of regulatory oversight for both the ACCC and the airport operators, while ensuring appropriate outcomes. (DoTRD 1996, p. 2)

The objectives of preventing the abuse of market power, minimising regulatory costs, encouraging commercially-negotiated outcomes and facilitating the access of new airlines have been reaffirmed in the terms of reference for this inquiry.

8.2 The price cap: CPI-X and price notification of aeronautical services

The CPI-X pricing formula (and the associated price-notification requirements) for aeronautical services is the centrepiece of the current price-regulation regime for the privatised core-regulated airports. The DoTRD Pricing Policy Paper (1996) indicated that there was some scope for improved performance and lower costs in producing aeronautical services in the early years of private ownership. Due to concern about the potential market power of airport operators in providing these services, the price cap required real reductions in a basket of aeronautical charges to provide incentives to achieve the expected productivity gains and to ensure that they were passed on to airlines.[1]

1 The *Prices Surveillance Act 1983* does not provide for legal enforcement of price reductions under the cap. Melbourne Airport (sub. 7) has indicated that, in any event, it considered that compliance with the cap was a condition of sale of the airport lease which it is bound to observe, a view supported by the Motor Trades Association of Australia Superannuation Fund (sub. 22).

Box 3.1 outlines the services included in the aeronautical basket. Aeronautical-related services subject to price monitoring are discussed in chapter 9.

In January 1997, the Federal Airports Corporation (FAC) set new aeronautical prices, to which the ACCC did not object, at its five largest airports, leaving prices at the others unchanged. These charges became the aeronautical prices operating when eleven of the core-regulated airports were privatised in 1997 and 1998. For the five years following sale, the price cap set maximum annual weighted average prices, determined by the underlying national CPI, less a discount factor (X) specific for each airport (chapter 3). Low underlying CPI growth has meant that, for most airports, the price-cap formula has resulted in falling maximum average aeronautical charges in nominal as well as real terms.

Aeronautical prices may differ from the allowed maxima but any over-recoveries must be made up by the imposition of lower than maximum allowable prices in a later year or years.[2] Within the cap, aeronautical prices may be set by the airport, although any increases need to be notified to the ACCC. This offers some opportunity for airports to adjust their pricing regimes, although changes to date have been limited.

An important rationale for choice of the CPI-X approach is that, while constraining prices, it still provides airport operators with an incentive to improve efficiency, as they are allowed to retain any productivity gains in producing aeronautical services, above those implied in the X factors.[3] In addition, it is potentially a low cost and low intervention approach once the parameters of the pricing formula have been established. As noted, there is a safety valve of allowing under- and over-recoveries of revenue to be rectified in later years.

Inevitably, because it was designed to provide relatively light-handed incentive regulation, on its own the CPI-X price cap was not attempting to track economically efficient prices over time. Nonetheless, if the starting prices were reasonable and the Xs based on feasible productivity improvements, then, in the absence of significant demand or supply shocks, the outcomes might provide reasonable approximations of efficient prices. In addition, the price cap only applies for a designated time, hence offering the opportunity to remedy inefficiencies in prices after a set period. Chapter 10 discusses issues in resetting price caps.

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2 Some airports have elected to make rebates to users for prices in excess of the cap rather than charge less than the cap in future years. Under-recoveries (that is, prices below the cap) may also be made up in later years.

3 The rate of increase in CPI also embodies productivity increases across the economy.

Starting prices for the price cap

When the FAC took control of 17 federal airports in January 1988,[4] it reviewed airport charges (aeronautical and non-aeronautical) on a *network-wide* basis, with the objective of covering network costs, including capital costs. This led to an increase in landing charges (which then provided around 90 per cent of aeronautical revenue) of about 6 per cent in July 1988, together with significant increases in non-aeronautical commercial lease charges. Over the next three years to April 1991, annual increases in landing charges (incorporating some restructuring of charges) cumulated to a further 23 per cent.[5] In April 1991, the FAC's landing charges were declared for surveillance under the *Prices Surveillance Act 1983* (PS Act).

Landing charges remained constant from April 1991 until January 1997, although there were some increases in other aeronautical charges over that period. In January 1997, aeronautical charges were increased by an average (on a network basis) of 10.8 per cent — this was not objected to by the ACCC.[6] However, the 1997 price increases were confined to the five major airports — Sydney, Melbourne, Brisbane, Adelaide and Perth — representing an average 12.1 per cent increase for those airports.

The ACCC (1996) observed that even with the average 13.8 per cent increase originally sought, the FAC believed that the five airports concerned would only just recover all aeronautical operating costs (including depreciation based on 1991-92 asset valuations but no returns to capital) from aeronautical revenues.

The differential price increases between airports were designed as a first step to more appropriate airport-specific pricing that had been recommended by the Prices Surveillance Authority (PSA) (1993). In not objecting to the FAC's January 1997 price increases, the ACCC (1996) also indicated its preference for further location- and service-specific pricing adjustments to improve the efficiency of pricing.

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4 The FAC purchased a further six airports from the Commonwealth Government in 1989 but sold Cambridge Airport to a private buyer in 1993.

5 This compared to CPI growth between June 1988 and June 1991 of 19.8 per cent and Average Weekly Earnings (ordinary time earnings of full-time adult males) increases of 20.5 per cent over the same period.

6 These increases were in fees for use of airport terminals, but were charged on the same maximum take-off weight basis as landing fees. The average 10.8 per cent rise compared to an average 13.8 per cent applied for by the FAC (a 15.2 per cent average increase for the five airports for which price increases were sought) and a CPI increase of 13 per cent between the June quarter 1991 and June quarter 1996. There had also been some relatively minor increases in terminal charges between 1991 and 1996.

Until the January 1997 increases, landing charges and, where they existed, terminal charges, were uniform across the FAC network and, while some airports made losses, these were more than offset by profits from the larger airports. Of the original FAC airports, over time, the number of loss-making units declined from ten (of fourteen) in 1988-89 to three in 1996-97.[7]

The FAC network landing charges before the airports were leased were essentially cost-based prices using a single till on a largely network-wide basis. A network-wide real rate of return on revalued assets of around 8 per cent had been earned consistently over a number of years.[8] As a percentage of airport revenue, the cross subsidies that existed between airports were proportionately much greater for the smaller loss-making airports than for the larger airports providing the subsidies. There were also significant cross subsidies between airport services, although the PSA (1993) indicated that the FAC's basis for cost allocation made it difficult to determine their exact extent. However, the general direction of subsidisation was from non-aeronautical to aeronautical.

Westralia Airports Corporation (WAC) (sub. 21) stated that the starting aeronautical prices at Perth Airport did not cover operating costs and hence provided no contribution to capital costs or a return on capital.[9] Similarly, Capital Airport Group (sub. 32) stated that the return on aeronautical assets at Canberra Airport was negative. The ACCC (1998h) report on FAC price restructuring proposals for Sydney Airport indicated that returns on aeronautical assets were estimated to be negative in 1998-99. Alice Springs, Darwin and Townsville airports made losses on their total operations in 1997-98, their final year of operation under the FAC.

The Department of Transport and Regional Services (DoTRS) indicated that leaving these distortions in the starting prices was a conscious policy:

> It was, however, neither practicable nor feasible to attempt to unwind these distortions prior to privatisation — which was intended to accelerate the micro economic reform in the aviation industry. Hence an important feature in the sales process was a requirement that the efficiency gains potentially available at the major regular public transport

7 Of the airports controlled by the FAC, Hobart and Cambridge were managed as a single unit as were Bankstown, Camden and Hoxton Park. Of the five further airport units (Alice Springs and Tennant Creek being treated as a single unit for reporting purposes) the FAC purchased from the Government in 1989, four were still making losses in 1996-97. Profits and losses were before interest charges.

8 In its 1996 revaluation of assets, the FAC valued land at market value for alternate use (capped at light industrial) and other assets at written down replacement cost (FAC 1996).

9 In the last year of FAC operation (1996-97), Perth Airport made a profit of $27 million and had a return (before interest expenses) of 12 per cent on total assets. In view of this, the failure of starting prices to cover aeronautical costs indicates that Perth Airport earned significant non-aeronautical returns.

> airports be shared with airport users. In effect, the Commonwealth chose to forego value in the sale by requiring real price declines in aeronautical charges. The prices oversight framework, and in particular the application of a CPI-X cap, was the vehicle used to deliver these short term gains to aviation users. (sub. 39, p. 8)

The DoTRD Pricing Policy Paper (1996) indicated that these arrangements were to be reviewed after five years.

The Xs

As part of the airport sale process, the Government announced real weighted average aeronautical price reduction factors (the Xs) which varied between airports. The Xs were determined by the Government using advice from the ACCC. The ACCC stated:

> The ACCC's advice was based on its analyses of the airports' projected demand, costs, expected productivity improvements and economic performance. The cap is based on the prices charged by the FAC before the airports' privatisation. (ACCC 2000a, p. 10)

In addition, the ACCC (1998a) indicated that one of the factors considered was a modest level of capital expenditure based on expected investment requirements over the five years of the initial regulatory framework. It also indicated that Adelaide and Coolangatta airports were exceptions with no amounts included for new investment.

Direction No. 20[10] to the ACCC from the Minister for Financial Services and Regulation stated that the value of each airport's X reflected productivity improvements that the Government considered could be made in the provision of aeronautical services at each airport. However, a weakness in the application of the price cap has been the failure to enunciate clearly how the Xs for each airport were determined. Transparency and certainty are both attributes of good regulation that are absent in the application of the X values.

Regardless of how they were calculated, airport operators were aware of the X values (and starting prices) before they bid for leases. They could make their own assessments of their ability to achieve the efficiency improvements and volume growth needed to make the resultant prices viable over the five-year period.

Traffic volumes are crucial in determining whether an airport achieves expected aeronautical productivity growth. The FAC (1998) observed that increases in traffic volumes had been the driving force in the corporation's performance — passenger numbers growing by over 80 per cent between 1988-89 and 1996-97. A number of airport operators (for example, Brisbane, sub. 8; Coolangatta, sub. 12; Alice

10 Direction No. 20, October 2000, replaced previous Directions (chapter 3).

Springs, sub. 25) indicated that traffic growth has been lower than the historical trend in recent years while others (for example, Melbourne Airport, sub. 7) have reported strong traffic growth.

While all lessees were aware of the starting aeronautical prices and Xs, in order to estimate allowable aeronautical prices under the cap, they also had to form their own expectations of likely CPI movements.[11] Many costs of aeronautical services are likely to move independently of the factors determining the CPI and it has been argued by some airports that the low increases in CPI since 1997 have been unfavourable to airport operators. WAC observed:

> We have also seen CPI work very much against us. Now, we realise that that's an external fact, but the reality is that the average rate of CPI in the lead-up to the privatisation of the airport — and we would think that was in some way taken into account in the CPI-X determination — has certainly deteriorated from our point of view quite significantly, and CPI is in fact the largest single-value driver of our business. (trans., p. 321)

It noted (trans., p. 321) that many of its costs are fixed and not related to the CPI while some of its non-aeronautical revenue, such as property rents, were adversely affected by low CPI growth. However, consistently low underlying CPI growth appears to have been an important factor in the decline in interest rates in recent years and hence may have indirectly provided airports with savings in the servicing of debt and equity capital.

While the implementation of the current CPI-X formula has been relatively routine, the price outcome may be crucial to future profitability and investment at airports. The ACCC observed:

> The current prices are a carry over from the prices charged by the FAC before privatisation. These charges were determined on a network basis. They were also determined on a single-till basis. This means that the current charges are unlikely to closely correlate to aeronautical costs. (sub. 36, p. 109)

Knowledge of the growth and productivity assumptions underlying the Xs designated for each airport would assist in assessing the extent of any distortions.

DRAFT FINDING 8.1

The single-till basis of the starting prices (also incorporating some cross subsidies between airports), and the real declines in aeronautical prices at most airports under the price cap suggest that, for many airports, aeronautical prices at the end of five years of the CPI-X regime may be below the level necessary to justify future aeronautical investment.

[11] In addition, bidders would have needed some view about likely price movements that would be allowed outside the cap for necessary new investment and other cost pass-throughs.

Of course, at least for the first five years, buyers of privatised airports would have factored in their expectations of the price effects of the CPI-X cap coupled with scope for price increases for necessary new investment (NNI). However, while the X values were known, there was a lack of transparency regarding the types of investments that were or were not included in the Xs, as well as (as discussed below) a lack of initial definition of allowable investment for cost pass-through to prices.

The possibility of obtaining increased prices to compensate for NNI (section 8.3) has created scope for ameliorating adverse effects the CPI-X cap might have on investment undertaken to expand or improve aeronautical capacity. However, incentives for replacement and maintenance investment would still remain low if the price cap has generated low aeronautical prices. Chapter 10 discusses possible approaches to resetting these parameters if a CPI-X approach were to be continued.

Implementation issues

Because CPI-X is a formula approach to price setting, there is limited scope for regulatory discretion once the starting prices and Xs have been established. For the first five years of the current regime, these parameters were established by the Government before the airport leases were sold. The major discretion in the current regime occurs in deciding the extent of cost pass-throughs for new investment and government-mandated security requirements discussed in section 8.3. However, one matter open to interpretation is the reach of the basket of aeronautical services subject to the price cap. Two issues have been dominant here, the facts of which are discussed in detail in appendix E.

First, there has been dispute between the ACCC and a number of airports regarding whether charges on taxi operators collecting passengers at an airport are part of the definition of aeronautical services (landside roads) and, hence, part of the basket under the cap. Second, as part of its monitoring of aeronautical-related prices, the ACCC (1998b) recommended that fuel throughput levies, which have been introduced at two core-regulated airports, should be transferred from price monitoring to be included in the price-cap basket because it considered there was a strong case that their implementation represented an abuse of market power. To date, the Government has not responded to the ACCC recommendation and fuel throughput levies remain subject to price monitoring.

In establishing a price-regulation regime, the important issue in deciding what services should be subject to greater scrutiny is the extent of airport operators' market power in those services. The ACCC contended that airports have taken advantage of market power by introducing taxi charges and fuel throughput

levies.[12] The International Air Transport Association (IATA) (sub. 43) argued that any fees on fuel suppliers should only cover the costs associated with the provision of fuel facilities.

Whatever the degree of market power in refuelling (chapter 6), airports appear to be able to extract charges greater than the costs of these services. Whether the implemented charges represent an abuse of monopoly power cannot really be assessed fully without considering the constraint placed on aeronautical returns by the price cap.

For core-regulated airports the issue is complicated by possible commitments given to bidders for airport leases regarding the treatment of these charges. Regardless of this, the ACCC (1998b) observed that directions under the PS Act required it to monitor fuel throughput levies and the Act required it to pay particular regard to the need to discourage firms from abusing market power. It also indicated (sub. 36) that it had received legal advice that taxi charges would be covered by the definition of aeronautical services used for the price cap.

Such alleged contradictions between the sale process and the regulatory framework increase the risk premium bidders will place on future sales, thereby decreasing returns to taxpayers and adding to the costs of implementing regulation. In undertaking sales of their assets, governments need to balance the objectives of high sale value and the efficient subsequent regulation of the activity concerned.

The taxi issue arose because of lack of detail in the guidelines and legislative instruments regarding the extent of services covered by the term 'landside roads'. Capital Airport Group (sub. 32) and WAC (sub. 21), amongst others, claimed that airport bidders were promised that ground transport charges could be introduced outside the cap. The ACCC argued that:

> The Commission's concern is that the matter of taxis could easily have been addressed in the regulatory instruments. The failure to explicitly address the issue has resulted in unnecessary uncertainty for airport operators and airport users. It has also resulted in substantial costs to the various parties because of the litigation process. (sub. 36, p. 112)

These problems also highlight the difficulties of imposing an industry-specific regulatory framework via the PS Act that contains its own set of regulatory objectives and criteria, and which may not reflect adequately the Government's desired regulatory framework for a particular industry.

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12 Melbourne Airport has sought a taxi levy through the NNI provisions, based on the costs of building improved services for taxi operators. The ACCC did not object to a charge of $0.66 per taxi, compared to the $1.40 originally proposed by Melbourne Airport (appendix E).

Notification of proposed price increases for aeronautical services

For companies declared under the PS Act, the requirement to notify proposed price increases is the usual mechanism through which the ACCC examines the firm's prices. However, for privatised airports, the main regulatory constraint on prices for aeronautical services is the price cap. While airports are required to notify proposed increases in prices of such services, the ACCC is not able to object to notified price increases that do not result in an airport breaching its price cap. DoTRD observed:

> The ACCC will not object to price changes to aeronautical charges unless they breach the price cap. This leaves scope for airport operators to continue to rebalance charges within the overall price cap on aeronautical charges set for the airport. (DoTRD 1996, p. 4)

Hence there is limited scope for the notification process to affect pricing other than applications made under the necessary new investment test and other cost pass-through provisions. The ACCC (sub. 36) has observed that the mandatory nature of the CPI-X Direction (No. 20) sits uneasily with its prices notification responsibilities under the PS Act.

In addition, low CPI increases in recent years have meant that the CPI-X formula has, for most airports, generated average nominal price declines for notified services. Hence notifications of proposed price increases have been unnecessary for most airports unless restructuring of prices within the cap was undertaken. Some airports have exceeded the cap in individual years, but because this has not involved price increases, the notification process has not been invoked. Canberra and Townsville airports, each with X values of 1 per cent, have both been permitted increases in average aeronautical prices under the price cap — 0.5 per cent in 1998-99, 0.7 per cent in 1999-00 and 1.8 per cent in 2000-01, while the cap permitted increases of 0.3 per cent at Launceston Airport (X of 2.5 per cent) in 2000-01.

8.3 The price cap: allowable price increases above the cap

Depending on the adequacy of starting prices and the method of determining the Xs, use of a CPI-X formula could be aimed at generating appropriate aeronautical prices without, for example, any need for further adjustments for investment (chapter 10). However, in the current regulatory framework the ACCC can sanction aeronautical price increases above the price cap in certain situations where the cap may inhibit expenditure necessary for efficient provision of aeronautical services.

Necessary new investment

The most significant exception to the price cap relates to recouping costs of NNI in aeronautical assets. For the eleven privatised core-regulated airports, the NNI provisions currently are formalised in Direction No. 20 under the PS Act and are implemented by the ACCC using the PS Act legislative criteria for performing prices oversight (section 17(3)) and the criteria in Direction No. 20 (chapter 3, box 3.2).

The NNI provisions comprise one of a number of instruments designed to encourage appropriate aeronautical investment by airport operators. These include clauses in airport sale agreements and leases specifying minimum levels of investment over each of the first two five-year periods following privatisation, and requirements for ongoing maintenance of airport structures and maintenance, to at least current standards, of those parts of the airport needed for aircraft access (chapter 3). Also, the lessee must provide for the use of the airport site as an airport. In addition, the quality monitoring provisions of the *Airports Act 1996* (Airports Act) should assist in encouraging investment in facilities to maintain quality of service, although airports are likely to have sufficient market incentives to maintain quality (chapter 9).

Since privatisation there have been 18 proposals for NNI cost pass-throughs involving total expenditure of over $200 million. The major expansion of airport infrastructure that occurred under the FAC has reduced somewhat the immediate need for new aeronautical investment at a number of airports.[13] The key issues in assessing NNI are whether it is an efficient and effective means for obtaining the prices needed to generate efficient levels of aeronautical investment, for facilitating access to airports for new airlines and for fostering the commercial relationships that will engender dynamic efficiency in airports and their users.

Incentives provided by NNI

The NNI process establishes incentives for airport operators and users that are important in determining whether efficient levels of new aeronautical investment are achieved.

In return for undertaking new investment, current NNI provisions offer airports aeronautical price increases either agreed to by users or determined by the ACCC. The ACCC still has the power to object to price increases negotiated between the parties.

13 From 1988-89 to 1996-97, the FAC invested $1.6-billion in airport infrastructure.

The NNI provisions appear predicated on the following:

- the prices allowed under the price cap may not be adequate to deliver an adequate return on new investment; and
- given scope for cost pass-through under NNI provisions (essentially rate-of-return regulation for NNI) there needs to be appropriate checks on airport investment proposals including majority user support for such proposals.

On the first point, as discussed above, evidence suggests that the CPI-X framework, applied to FAC starting prices, has resulted in aeronautical prices that may not of themselves justify new aeronautical investment. Therefore the NNI test is important in allowing efficient new investment to achieve appropriate returns. Airport operators bid for the leases on the basis of the CPI-X and NNI procedures operating for at least the first five years of the lease.

However, even for investments that replace or expand capacity (and hence maintain or increase revenue), if aeronautical prices are too low, an airport is not likely to proceed with them. Melbourne Airport observed:

> The necessary new investment arrangements exist, in our view, solely because without them airports would not invest because airports require a price increase across the cost base as a whole to justify investment, because at the current prices you would not invest at all. So the necessary new investment arrangements, in our view, have to be seen very clearly as a fix for the problem of prices being below what you might call efficient investment prices. (trans., p. 167)

The potential for the airport to earn non-aeronautical revenues from capacity-expanding or quality-enhancing investments may ameliorate such a problem somewhat. In addition, some new investment may be undertaken based on the cost savings they deliver to the airport operator, rather than the revenue they generate. The ACCC (2000b) does not allow price increases for cost-saving investments.

On the second point, it is not clear that airports have an incentive, either with or without the current price regulation, to undertake unnecessarily extravagant investment — so called gold plating. Only if they consider that regulators will grant prices that will provide above normal returns on assets — prices that they believe can be realised in the market — are airports likely to over-invest. Capital market pressures on privatised airports — many of which are dominated by sophisticated shareholders such as fund managers and large corporations — should discourage unproductive expenditure (chapter 7).

However, NNI provisions could encourage inefficient substitution of new capital for other inputs, given the scope to receive price increases for new investment. WAC

considered that the ACCC's interpretation of the term 'investment' was too restrictive:

> … the narrow definition suggested provides an incentive to airport lessee companies to select more costly solutions that unquestionably qualify as capital rather than what may well be more economic short-term investment solutions that are denied because of the definition. (sub. 21, p. 18)

The ACCC (2000a) indicated that it considered each NNI proposal on its merits and could allow pass-through into higher prices of incremental operating and maintenance expenditure flowing from new investment. Appropriately applied, this approach could avoid biasing expenditure choices between alternative methods of undertaking a proposal which qualified as new investment. However, it would not deal with distortions to the choice between an option that would not qualify as new investment and an alternative approach that would.

Airport operators also may have an incentive to try to convince regulators to allow them inefficiently high prices for new investment. While for firms in competitive markets charging inefficiently high prices would result in lower profits, a firm with market power could increase profits if allowed to follow such a strategy. Of course, there is an incentive to submit ambit claims if the regulatory arbitration process involves determinations that fall somewhere between the competing claims of airports and users.

If the airline market were competitive (that is, if airlines did not have market power), and if they were targeting similar parts of the market, the interests of airlines should lead to their agreement to required investment at efficient prices at the appropriate time. Delays in approving efficient NNI prices would not be in the airlines' interests. Hence, the requirement in the pricing guidelines that users with a significant interest support the new investment and associated charges would seem a potentially useful criterion for assessing new investment proposals. The Board of Airline Representatives of Australia (BARA) argued:

> The interests of BARA members are promoted by encouraging airports to invest when it is efficient to do so. No one stands to lose more than the airlines if necessary new investment is not delivered in a timely manner. It would make no sense for airlines to support a regulatory system that ultimately failed to deliver an adequate stream of investment in airport services. (sub. 41, p. 38)

However, there are several reasons why airlines, particularly incumbent airlines, might have incentives that conflict with efficient provision and pricing of new investment. If an investment provides benefits to new entrants, then existing airlines will have an incentive to delay that investment. Even if the existing airlines expect to receive net benefits from such an investment the total impact on them may be negative because of the facilitation of increased competition. The significant

reductions in airfares that have occurred on routes with new entrants indicate the size of these costs for incumbent operators.

The Australian Airports Association (AAA) argued:

> Airlines have been utilising the procedural aspects of the 'necessary new investment' (NNI) provisions as their primary means by which to undertake regulatory gaming, and thereby stifle new aeronautical investment activity at airports and consequently stifle the opportunities available to the new entrant airlines. (sub. 15, p. 4)

Brisbane Airport Corporation (BAC) observed that its problems were limited to certain projects:

> In some instances those projects are projects that provide benefits to new entrant airlines either greater than the incumbent airlines or to an equal extent. So they're using those mechanisms, or the NNI mechanism, to stall those projects that could provide some benefits to their competitors. (trans., p. 208)

Qantas Airways (sub. 48, p. 21) stated that airport operators' claims that it had been involved in gaming were 'entirely without merit'.

The ACCC (sub. 36, appendix D) pointed out that the shared nature of airport terminals has encouraged strategic behaviour by potential tenants trying to minimise their share of the terminal costs. Such behaviour has been observed in negotiations regarding the new terminals at Melbourne and Adelaide airports. It is difficult for a regulator (or an airport) to disentangle the genuine from the strategic aspects of such claims. Different airlines do have different requirements for terminal and other facilities, but they are likely to exaggerate these when negotiating airport charges — even in the absence of a regulator.

The ACCC also noted that there can be incentives for higher-cost operators to try to raise the costs of low-cost competitors, even if this means increasing their own costs.[14] Virgin Blue observed:

> The Adelaide terminal is one which is considerably out of whack with the operating strategy of Virgin Blue and is significantly higher cost, and that is a very real concern, where a major incumbent airline actually might have the capacity to impose a significant increase in the operating costs of a new entrant airline. (trans., p. 354)

In addition, the incumbent airlines have had a long history of dealing with an airport operator pricing on a single-till basis. Switching to an NNI regime predicated on new aeronautical facilities covering their full cost through aeronautical price increases is a significant shift in approach which might be expected to encounter some resistance.

[14] The higher cost operator may not be less efficient but may simply offer a higher level of service as part of its business strategy.

Melbourne Airport argued:

> The current arrangements fail to provide an environment in which normal commercial arrangements, between airport operators and airlines, will emerge. Airlines see the opportunity to involve the ACCC in every matter, as the source of better short-term financial outcomes than they could achieve through commercial negotiations. They effectively seek to game the process. In a situation where they have nothing to lose (other than the asset not being provided at all) why would they do otherwise? (sub. 7, pp. 32–3)

Such behaviour may have been sensible for airlines in the case of some investments if they saw airport operators as effectively captured in their financial investment in an airport, and constrained by current lease and safety requirements to undertake certain capital expenditures, even if the investments are not financially viable at current aeronautical prices. For example, WAC (sub. 21) indicated that due to safety, security, environmental or regulatory requirements, it had undertaken capital investments that were not approved for NNI pass-through and did not provide an adequate return at current aeronautical prices.

However, airlines would also have an incentive to object to airports seeking excessive prices (which could be achievable in the market and profitable for an airport with market power) for undertaking new investment. The regulator is faced with determining which airline claims are justified from an efficiency perspective and which are based on other incentives facing the airlines.

Developing NNI procedures

The DoTRD Pricing Policy Paper (1996), and the PS Act criteria (section 17(3)) and associated Ministerial Directions, provide limited guidance for applying the NNI provisions. NNI was not defined and the extent of investment expenditure included in the X factors generally has not been forthcoming. Finalised ACCC guidelines were not published until April 2000 — nearly three years after the first leases commenced. These guidelines included the threshold matters of defining 'necessary', 'new' and 'investment' and, in applying a cost-based regulation approach, a variety of other issues, such as cost of capital and common cost allocations between aeronautical and non-aeronautical services. Hence, while initial uncertainty was to be expected in applying the new system, this has been heightened by the lack of guidelines on important parameters.

This may not have been a problem if the intention underlying the DOTRD Pricing Policy Paper (1996) — that commercial relationships between airports and their immediate customers would generate negotiated outcomes — had been achieved. However, in general, successful negotiations on major issues have not been the rule and regulatory intervention has been continually required.

The ACCC (2000b) indicated that user support would be an important determinant in the ACCC's assessment of whether a particular project should be classed as new investment. If such support were not forthcoming, the ACCC defined new investment as a change in fixed durable inputs that does not simply seek to replace natural degradation of capital. WAC (sub. 21) claimed that airport buyers when bidding for leases assumed that NNI provisions included replacement investment. However, ACCC (2000b) cites DoTRS (in April 1999) correspondence to the industry as expecting essential and on-going investment to be funded from ongoing revenue streams.

As well as considering the meaning of the term NNI, decisions on whether particular investment should be covered by NNI procedures are also linked to what was included when calculating the Xs in each airport's CPI-X formula. If the starting prices and/or the calculation of the X factors included an allowance for certain types of investment, then there is a clear case for their exclusion from NNI. Airport operators purchased leases with full knowledge of the aeronautical starting prices and the X factors. However, the appropriate expectation for NNI issues is not so transparent. In contesting NNI applications, airlines have argued that certain capital expenditure was included in the Xs and hence should not attract NNI cost pass-through. However, as discussed above, what was contained and what was omitted from the Xs has never been specified exactly and airport operators appear to be particularly uncertain in this regard. Northern Territory Airports stated:

> Clearly the Government has been remiss in not divulging how the 'X' factors were derived and thus has created an expectations gap between airlines, operators and indeed the regulator. (sub. 25, p. 15)

AAA argued:

> The ACCC has incorrectly interpreted the scope of NNI provisions to exclude replacement capital expenditure. The impact of this incorrect definition of NNI by the ACCC has been the rejection and deferral of investment in replacement aeronautical infrastructure as airport owners are unable to justify capital expenditure on assets that do not allow for the recovery of full costs and a return on their capital. (sub. 15, p. 4)

On the other hand, Qantas (sub. 48) considered that current prices already contained a component for depreciation of existing assets that would allow for re-investment. However, while existing aeronautical prices may provide some return on replacement investment, the important issue for generating efficient levels of investment is the sufficiency of that expected return in the future.[15]

15 Because it followed a network-wide single-till approach, the FAC undertook significant new and replacement aeronautical investment even though aeronautical prices may not have provided the revenue needed to justify them. Profits from non-aeronautical activities made up

It is not clear whether any current disincentives to investment (for example, the resurfacing of a runway at Perth Airport) reflect the interpretation of NNI by the ACCC, or rather indicate that starting aeronautical charges were insufficient to justify replacement investment on a dual-till basis.

The application of NNI procedures also has suffered from a lack of clarity in the original pricing guidelines and subsequent legislative instruments. The pricing guidelines have no legislative effect and, in applying the NNI regime, the ACCC has had to operate under the PS Act and related Directions. These do not refer to certain of the objectives and policy intentions of the prices oversight regime, such as encouraging commercial negotiations. However, the ACCC (sub. 36) expressed concern regarding the deterministic nature of existing Ministerial Directions for airports and considered that this sat uneasily with the discretion given to the ACCC under the PS Act.

In arguing for greater use of cost–benefit analysis in evaluating NNI proposals, Professor Forsyth observed:

> At present, the ACCC works to a list of general criteria, which in themselves are reasonable enough, but which do not lead to a systematic evaluation of investments. (sub. 5, p. 26)

The problems in using the PS Act also are highlighted by the Commission in its draft report reviewing the PS Act (PC 2001c). It observes that the PS Act has many deficiencies as a means for prices oversight and argues that there is little justification for it as a generic price oversight mechanism. Thus, in the few cases where any price control might be deemed necessary, it argued that this would be best implemented via industry-specific legislation.

Participants' views

Participants' views differ significantly regarding the operation of the NNI provisions. In general, incumbent airlines have been happy with the process, new airlines have varied in their opinions and the airport operators generally have expressed dissatisfaction. The views of those involved in framing and implementing the regulations also differ.

the shortfall and enabled the FAC to achieve the accounting rate of return objectives imposed by the Commonwealth Government.

Airlines' views

The DoTRD Pricing Policy Paper (1996) placed emphasis on user support for new investment and charges. Among airlines, incumbents and new entrants had conflicting judgements. BARA stated:

> In BARA's view the current regulation of the privatised airports in Australia has acted to constrain, to some extent, the market power of the airports while encouraging efficient investment in airport expansion. (sub. 26, p. 1)

Ansett considered that the regulatory regime provided some incentive for airlines to oppose excessive prices that otherwise would be lacking.

> In the case of the regulated Australian airports, the current economic regulatory regime provides the Ansett/Air New Zealand Group with an incentive to scrutinise the costs and prices of airports. This is because the regime allows the airlines to have sufficient influence over these costs to justify the resources required to scrutinise them … (sub. 42, p. 38)

Qantas (sub. 48) considered that there was some room for improvement in the administrative approach to assessing NNI applications, but that airports' complaints of the process retarding investment, or of airlines 'gaming' the system, were invalid.

Impulse Airlines, then a new entrant into domestic trunk routes, was critical:

> Impulse's introduction in the Canberra marketplace also affords an interesting example of lack of support for infrastructure development. Canberra International Airport had tried for 2 ½ years before the arrival of Impulse to gain support from both Qantas and Ansett to re-develop of apron space which had been in its current state for 28 years. It was not until the introduction of Impulse that CIA felt able to take their case to the ACCC. Whilst arguments over rates of return were at stake, this is not the key issue. The key issue is that an airline competitor was able to stymie infrastructure development for 2 ½ years in order to harm a competitor and ultimately the airport. (sub. 18, pp. 2–3)

Impulse (sub. 18) also felt that the price cap had meant that infrastructure quality had to be compromised at the new Melbourne and Sydney express terminals.

On the other hand, Virgin Blue (sub. 30) (a new low-fare carrier) contended that NNI pass-throughs outside the price cap should be allowed only for investments that would not be undertaken without the pass-through. It considered that incremental non-aeronautical revenues should be considered when examining NNI proposals such as Melbourne Airport's domestic express terminal.

Such differing views of two new airlines regarding pricing of the same investment, indicate the difficulty for the regulator in identifying facts, the targeting of different market segments, and gaming behaviour. Impulse and Virgin had different business

strategies which may have led to their divergent attitudes to the Melbourne express terminal, but they may also have attempted to use the regulatory framework to their advantage. Similar issues arose regarding Virgin's use of the proposed Adelaide multi-user terminal.

Impact of NNI provisions on investment and commercial relationships

DoTRS, which coordinated development of the regulatory framework, considered that the application of NNI provisions had not worked as expected and had hindered new investment and the development of commercial relations.

> At present the level of regulatory intervention is excessive and may in fact be counterproductive in that it is providing an incentive for regulatory gaming by stakeholders for commercial advantage rather than allowing market forces to operate and encourage commercial negotiation. There is also considerable evidence growing that the regime is creating disincentives to invest in aeronautical infrastructure and economic efficiency is being adversely affected. (sub. 39, p.19)

However, the ACCC argued that its involvement had not deterred investment:

> The investments undertaken by airport operators to date suggest that the Commission's pricing decisions have not deterred investment in airports. In particular the experience suggests that the Commission has adequately allowed for the risks facing airport operators. (sub. 36, p. 29)

That new investment has taken place, particularly in the early stages of the new untried regime, does not guarantee that the regulatory arrangements have not had important disincentive effects. Inevitably, airports initially will attempt to make use of the new regime. It is their response to this experience that will determine longer-term implications.

In varying degrees, all airport operators have been critical of the NNI regime, in particular the way in which it has been implemented. Melbourne Airport argued:

> The necessary new investment arrangements are a makeshift attempt to address the critical issue of under-investment. The limitations of this approach are apparent however. Poor administration and the scope for gaming by airlines raise risks and so costs for airports. Any resulting under-investment is likely to be felt most keenly by new entrants into the airline business. (sub. 7, p. ii)

Following Melbourne Airport's exposure to the NNI process when developing a new common-user terminal, it indicated (trans., p. 156) that, in future, it would delay new investment until regulatory approval of proposed related price increases had been received.

BAC (trans., p. 206) indicated that it was following a similar approach, while Gold Coast Airport Limited (GCAL) stated:

> There is no certainty that commercial terms agreed with users will be endorsed by the ACCC …
>
> Because of this uncertainty GCAL has deferred initiating any necessary new investment until the process becomes more clearly defined. This decision will mean additional maintenance costs are incurred in the short to medium term as current pavements are showing signs of stress due to increasing use of heavier aircraft by both Qantas and Ansett. (sub. 16, p. 12)

Northern Territory Airports (sub. 50) indicated that because of the cost, delays and uncertainty of the application of the NNI process, it had deferred a number of investment projects indefinitely.

However, BARA stated that its members found no evidence or rationale for an investment slow-down by airports and cautioned against taking airports' complaints at face value:

> … airports might argue that the current arrangements constrain investment as a path to convincing the Commission that complete deregulation is a better alternative. (sub. 41, p. 39)

Ansett (sub. 42) stated that despite some initial problems, the relationships between airlines and airports under the current regulatory arrangements were improving and are better than those in New Zealand under a less intrusive regime.

Motor Trades Association of Australia Superannuation Fund identified a more fundamental problem for investment under regulatory oversight:

> Even the best intentioned and informed regulator will make mistakes and proper assessment of investment proposals take time. Requiring ACCC approval of proposed price increases or new charges then necessarily creates risk, uncertainty and delay, all of which increase the costs of investment subject to assessment (and the required rate of return). These alone would create a disincentive to new aeronautical services investment. (sub. 22, p. 54)

Australian Airports (Townsville) (sub. 14) indicated that even if investment eventually takes place, the NNI process was slow and cumbersome and airlines have proven difficult to deal with. It also considered that price increases needed to justify new investment had been quickly negotiated with airlines and the local community at its non-core-regulated Mount Isa Airport (sub. 14).

Encouraging commercial negotiation in establishing prices for airport services was a key objective of the current price-regulation framework. While there is little scope for negotiation in applying the CPI-X formula, the NNI test held a clear expectation

that negotiations between airports and their users would often generate acceptable outcomes for the regulator to approve. AAA felt that this had not occurred:

> It was a clear plank of the Government's policy objectives to encourage the development of mature commercial relationships between airlines and airports. I think it's clear that that hasn't happened. To some extent it's understandable it hasn't happened because the commercial reasons for failing to reach agreement are just so strong. (trans., p. 142)

Professor Forsyth (sub. 5) argued that negotiated agreements where users are willing to pay the costs of investments are preferable to regulatory intervention. Negotiated agreements use the greater knowledge of the participants rather than the often imperfect information available to the regulator. However, evidence suggests that, in the current regulatory framework, the relatively easy recourse to the ACCC combined with the incentives facing airlines appears to have forestalled the negotiation process.

Compliance costs

There has also been concern, particularly among smaller airports, regarding the cost to them of the NNI process. Airport operators have also complained of the expense of even minor projects needing to go through the full NNI process.

Because of concern about setting national precedents, domestic airlines may oppose even small NNI increases at small airports. Possible international precedents might give incentives for international airlines (through BARA) to take a similar approach. Melbourne Airport submitted:

> It must also be added that airlines (we suspect at the urging of IATA) often see any regulatory decision as having the potential to be a global precedent, and therefore often argue points that they privately concede, have no merit. (sub. 7, p. 33)

The requirement for even small investments to be subject to full NNI reviews if cost pass-throughs are sought, appears to have added to the regulatory costs and detracted from the quality of outcomes of the regime. WAC (sub. 21) argued that all projects were considered equally under the regulatory guidelines regardless of size. Capital Airports Group (sub. 32) indicated that in its experience even small NNI projects had been subject to excessively detailed scrutiny.

The potential benefit of the NNI process of preventing inappropriate price increases while encouraging appropriate new investments to be undertaken, needs to be balanced against the direct and other costs of the regulation process. In the case of small investments, potential benefits are very small while the direct regulatory costs may be relatively high. This is particularly so for smaller airports that are less likely

to be able to group a range of small projects to reduce the size of direct regulatory costs relative to the investment concerned.

Melbourne Airport stated that a conservative estimate of the cost of Melbourne and Launceston airports complying with the price-regulation regime (including quality monitoring) was $500 000 per annum.

From an airline perspective, Ansett (sub. 42) submitted that, with the exception of Sydney Airport, the bulk of its costs under the current regulatory framework were similar to what they would expect to incur in dealings with suppliers in a commercial environment.

Assessment of NNI provisions

For aeronautical services as a whole, the NNI regime has moved prices somewhat above the single-till approach to pricing used by the FAC. The broad thrust of the X factors in the CPI-X formula would appear to be to generate aeronautical prices that essentially maintained the extent of single-till cross subsidies between services contained in the FAC prices existing at the start of privatisation. Increases in non-aeronautical profits gained since then were not factored into the Xs. Price increases obtained under NNI would have further ameliorated this situation, but only for the expansion in the capital base involved.

To the extent that the single-till starting prices of the current regime did not allow for a sufficient return on replacement investment, the exclusion of replacement investment from the interpretation of new investment means that the current NNI process could never generate aeronautical prices that covered full aeronautical costs. If lessees bid on the basis that NNI provisions excluded replacement investment, the bid prices should have reflected this and, at least for the five years of the initial regulatory framework, necessary replacement investment should have been undertaken at existing aeronautical prices. However, in the absence of clear and transparent statements of what was included in the Xs and the lack of initial detailed guidelines on the application of the NNI process, it is difficult to determine what should be expected of airport lessees in regard to undertaking replacement investment.

As the key interface between airports, airlines and the regulator, the NNI provisions have not generated the commercial relationships and light-handed regulation envisaged by the DoTRD Pricing Policy Paper (1996). No doubt some of these problems reflect teething difficulties of a new regulatory system. Definitions and procedural guidelines needed to be developed and experience had to be obtained in working with the new system. The parties needed to adjust to the new environment

— the airports from the FAC network framework and the airlines (operating in a rapidly changing airline industry) to dealing with fellow private companies rather than a government enterprise.

Nonetheless, the incentives provided by the regulatory framework suggest some endemic problems that, if not addressed, will not dissipate with time and experience. The easy low-cost access to a regulator reduces the incentives for users to negotiate with airports while low aeronautical charges mean that airports view all new investment as a means of obtaining price increases.

Whether the NNI process has stimulated efficient levels of new investment is not clear. Complaints from airlines have concerned the aeronautical prices sought to cover new investment rather than a failure by airports to invest. However, the observed level of investment may still have been forthcoming if base aeronautical prices initially were set high enough to justify new investment. Market incentives for airport operators not to restrict output and investment artificially are discussed in chapter 7. The major area of concern for investment expenditure is the combined impact of the CPI-X and NNI provisions on returns for replacement investment.

The combination of the price cap and NNI rules would seem to have avoided any exploitation of market power that airport operators might have attempted in the absence of such regulations. However, in the short period in which the regulation has been operating, the NNI process appears to have created regulatory hurdles for aeronautical investments.

DRAFT FINDING 8.2

To date, the necessary new investment provisions largely have not achieved the commercially-negotiated outcomes that were envisaged by the architects of the regime. Partly this has been due to the need to develop criteria and procedures for necessary new investment after purchase and for participants to adapt to the very different business environment following airport privatisation.

However, the observed difficulties also appear to indicate some fundamental problems, in particular:

- *the incentives for some participants to use the regulator rather than achieve commercially-negotiated solutions;*
- *the lack of transparency regarding what investment was considered to be included in the base aeronautical prices and what was to be covered by necessary new investment, with resultant effects on incentives to invest;*
- *the high costs of complying with the regime; and*
- *the regulatory risk introduced by the need to have every investment-related price increase vetted by the regulator.*

Other cost pass-throughs

As part of the price-cap arrangements, the ACCC is required to allow aeronautical prices above the cap to cover the direct costs (not including rate of return or overhead costs) of government-mandated security requirements. The various Ministerial Directions which have allowed the pass-through have not defined direct cost. The ACCC has interpreted direct cost to mean costs that would have been avoided if the security requirements had not been imposed, and to include depreciation and rate of return on capital. The ACCC has received over 30 security cost pass-through proposals.

In December 1998, DoTRS made changes to security regulations that placed the responsibility for international passenger and baggage screening at international terminals on airport operators. WAC claimed that the ACCC's initial decision on allowable rates of return on the capital investment required had created inefficient results:

> The ACCC initially refused to allow airports to earn a return on capital invested to purchase security equipment of greater than the cost of debt. This created a dis-incentive for airport operators to invest in the required capital equipment, thus allowing the security contractors to supply and charge for the equipment at rates which, presumably did allow for an equity return. (sub. 21, p. 25)

WAC indicated that the ACCC later allowed somewhat higher rates of return. However, by then a number of airports had committed to external security contractors to provide the equipment as the return on contractor's capital embedded in their charges was fully recoverable in higher aeronautical prices.

The price-cap regulations also allow congestion charges employed as part of an airport demand management scheme under the Airports Act, to be passed through the cap. There have been no such charges imposed at the privatised core-regulated airports. In the past, government attitudes with regard to the more congested Sydney Airport have not favoured peak charges, due largely to concerns about their impact on fares for regional commuters. Issues of congestion pricing and price cap regulation are discussed further in chapter 10.

8.4 Price regulation of Sydney Airport services

Sydney Airport is the only core-regulated airport that has not been privatised. Instead, the Commonwealth Government chose to transfer responsibility for its management and operation under a long-term lease to Sydney Airports Corporation Limited (SACL), a new government-owned public corporation, in July 1998. The

Government is currently in the process of privatising operation of the airport by selling all of the outstanding shares in SACL.

Regulatory and operating environment

Since it took over the operation of Sydney Airport, SACL has been subject to price notification for aeronautical services and monitoring for aeronautical-related services under the PS Act for the same groups of services as the privatised airports (chapter 3). It has not had a price cap imposed but, like all declared companies, it must inform the ACCC of proposed price increases for notified aeronautical services. This regime is more extensive than the price regulation that applied to the FAC. Additional elements include the introduction of price monitoring for some services, the inclusion of necessary new investment as a justification for price increases and the monitoring of service quality under the Airports Act.

Sydney Airport is now operating as an individual airport facing some degree of competition from other major airports, rather than as part of an Australia-wide network of FAC airports. Because of its relatively high traffic volumes, government restrictions on airport hours and number of aircraft movements, and its relatively small land area, Sydney Airport suffers from greater pressure on its capacity than other Australian airports, particularly at peak times.

As mentioned above, for the eleven privatised core-regulated airports, the January 1997 FAC price rises (involving only four of these airports) were the last before privatisation. In the case of Sydney Airport, the FAC made a further price notification which resulted in a large restructuring of aeronautical charges from October 1998, but one that did not lead to an overall increase in revenue. Landing fees were cut by around 50 per cent but international terminal charges were increased by up to 30 per cent, leading to a net increase in aeronautical charges for international services and significantly lower charges for domestic flights. In addition, the peak period landing surcharge of $250 (applicable to all aircraft) was abolished amid Government concerns about its impact on regional airlines.

The major objective of this restructuring was for charges to international aircraft to reflect more closely the cost of terminal facilities used by them. However, the resultant landing charge of $2.92 per tonne of maximum take-off weight was only a little over half of those at the other core-regulated airports. Hence, while the price restructuring resulted in reasonable returns on investment in the international terminal, it also created very low returns from aeronautical revenue on other aeronautical investment.

The ACCC pricing decision

In December 1999, SACL presented a draft aeronautical pricing proposal, containing substantial price increases, to its customers and the ACCC for consultation purposes. The draft subsequently was modified (SACL 2000) and in October 2000 was submitted to the ACCC for assessment purposes. The new proposal remained substantially the same as the original draft and sought average price increases of around 130 per cent.[16] The ACCC carried out further extensive consultations before releasing a draft decision in February 2001. Following further public consultation, and the formal price notification by SACL on 28 March, a final decision was released in May (ACCC 2001i).

The ACCC did not object to aeronautical charges that generated revenue increases of 87 per cent of SACL's proposal. This involved a 14 per cent reduction in SACL's proposed increases for runway and international terminal fees but no changes to the proposals for other less significant charges. The main factors generating lower approved price increases were a lower valuation of land, a smaller allowable rate of return on capital, lower depreciation and a reduction in allowable operating costs. Several of these issues are discussed below.

The SACL proposal was based on the ACCC's cost building block approach to determining allowable prices. This involves establishing the efficient projected level of various cost components (for example, operating costs, depreciation and return on capital) and then determining prices which, based on projected volumes, would provide the revenue needed to cover these costs.

Hence, while for the first five years of operation aeronautical price regulation at the other core-regulated airports is being based on incremental changes (determined by the price cap and cost pass-through provisions) to FAC prices, Sydney Airport regulation has now moved to a complete rebasing of prices. In particular, its aeronautical prices are now freed from the inter-service subsidies that were part of the FAC approach to pricing. Because non-aeronautical revenue had traditionally provided significant profits at Sydney Airport, large aeronautical price increases were required to generate adequate profits on aeronautical activities on a stand-alone basis.[17]

16 SACL made further adjustments to various cost components of its proposal during the ACCC's consultation process.

17 ACCC (1998c) indicated that, in 1998-99, Sydney Airport was forecast to recover 88.6 per cent of aeronautical costs, excluding a rate of return on capital. Higher depreciation charges on significant quality enhancing capital investment undertaken between 1998 and 2000 also required higher prices.

In determining allowable aeronautical prices for SACL, the ACCC modelled allowable revenue over a five year period.[18] It then generated a constant nominal price for five years which was forecast to provide SACL with a net present value of cash flows equivalent to this projected allowable revenue stream. The ACCC stated:

> The Commission considers that — in the event that the current regulatory arrangements remain in place — it would be appropriate for prices of aeronautical services at Sydney Airport to be subject to further review at the end of five years following the introduction of the new charges. (ACCC 2001i, p. 203)

The current regulatory framework allows for applications for NNI cost pass-throughs into prices during this period.

While the Commission does not see the need for a detailed commentary on the ACCC decision in this report, some aspects of the decision and related issues are of particular relevance to future price regulation at Sydney Airport and any other core-regulated airports for which ongoing price declarations or monitoring might be considered appropriate. These are discussed below and in appendix F (land valuation).

Single till versus dual till

In setting aeronautical charges, the FAC traditionally used a network-wide single till.[19] Its 1996 and 1998 pricing proposals for Sydney Airport moved towards an airport-specific approach but continued with the single till. While the DOTRD Pricing Policy Paper (1996) indicated that, with respect to the privatised airports, the Government was not mandating a single-till approach to setting aeronautical charges, this was in the context of a price cap essentially based on single-till starting prices.

SACL's aeronautical price proposal, in arguing for an average 130 per cent increase in aeronautical charges, moved to a dual-till approach. Costs and revenues of non-aeronautical services (including aeronautical-related services) were not considered when justifying the proposed prices. The ACCC draft report largely accepted the SACL approach but did take into account returns on certain aeronautical-related services in determining aeronautical prices to which it would not object. Following a Government Direction (No. 22, April 2001) not to take non-aeronautical services

[18] In undertaking this exercise the ACCC used projections of traffic volumes and productivity growth and made some allowance for increases in SACL's input prices.

[19] Partly reflecting its high land values, Sydney Airport tended only to achieve rates of return on assets similar to the network average. Hence its charges were not cross subsidising other airports. The January 1997 price increases, which applied only to the five major airports, lifted Sydney's rate of return by around 1 per cent.

into account, the ACCC final report adopted the dual-till approach proposed by SACL.

To the extent that locational rents create above normal returns in non-aeronautical activities, use of a single-till approach is likely to distort investment decisions in both aeronautical and non-aeronautical services. Because any above normal profits in non-aeronautical services would be totally applied to reduce aeronautical prices, additional aeronautical investment would receive below normal returns.[20] Similarly, airport operators will have reduced incentives to achieve additional locational rents — rents which reflect consumers' valuation of certain non-aeronautical services being available at an airport (appendix C).

In its draft report, the ACCC argued that SACL possessed market power in the provision of certain non-aeronautical activities, such as car parking, and that above normal returns in these activities should be subtracted from allowable revenue in calculating aeronautical prices. Although in response to Direction No. 22, the ACCC reversed this approach in its final decision, it argued that the Government's policy may differ from the approach appropriate for achieving the economic efficiency objectives set by the ACCC for assessing Sydney Airport's prices.

The Commission has several concerns with the ACCC's draft report approach. First, it is important to establish that any above normal returns in non-aeronautical services reflect the abuse of market power and not locational rents (transitory or long-term) or short-term capacity shortages. If it is the latter then confiscating the returns is likely to cause inefficient investment and operating decisions, particularly where a facility such as Sydney Airport is capacity-constrained.

Second, even if excess profits on non aeronautical services reflect market power it may be better to address the issue directly by constraining this market power rather than requiring cross subsidisation of aeronautical charges — especially when, because Sydney Airport is slot constrained, lower aeronautical charges will largely benefit airlines holding slots, not their customers. While the ACCC does not have the power to object to non-aeronautical charges, it can recommend that they become services subject to notification or monitoring. However, this option may be constrained in the future by any Government commitments to bidders for SACL regarding the regulatory framework for Sydney Airport.

The implementation of dual-till pricing at Sydney Airport means that the outcome of price regulation now differs markedly from that at the privatised airports. The

20 Under a dual-till system, to the extent that aeronautical investment has complementary impacts on non-aeronautical profits, the airport operator would take these into account when assessing whether to undertake this investment.

dual till removes the constraints on new or replacement aeronautical investment that may occur under a single till or the current legacy of the FAC's single till. These issues are discussed further in chapter 10 and appendix C.

Cost of capital

Particularly for an airport with high asset values like Sydney, returns on capital are a significant component of costs. The quantum of returns to capital allowed in the building block approach is a function of asset values and the allowable rate of return. There are a number of complex and strongly debated theoretical and empirical issues to be resolved in estimating appropriate rates of return. This potentially makes for a significant range of possible rates to be applied by the regulator.

In the Sydney Airport decision, the ACCC's assessment of SACL's real weighted average cost of capital was 6.8 per cent compared to SACL's proposal of 7.75 per cent — resulting in a reduction in allowable annual revenue (on the ACCC's assessed asset base) of a little over $13 million, leading to aeronautical prices about 6 per cent lower than sought by SACL.

The range of potential uncertainty surrounding estimates of the appropriate cost of capital illustrates the potential disputes or errors in determining cost based prices. Hence, prices set by the regulator may well be inefficient — either too high or too low. Even if these highs and lows balance out in the long run (as they might if the regulator does not bias the prices one way or the other), the added risk to the regulated firm will now require higher rates of return if efficient outcomes are to be achieved. If a regulated firm has market power it will be able to offset periods of inefficiently low regulated prices by taking advantage of the periods of high prices. However, if it does not have market power it would not be profitable for it to avail itself of the periods of excessive prices. The potential costs of different directions of error in regulatory prices are discussed in PC (2001a).

Land valuation

Although Sydney Airport is a relatively small airport (in terms of area) by Australian capital city standards, its close proximity to a highly-valued capital city centre means that the value of the airport site is also very high. Markedly different views have been put as to how airport land should be valued in setting aeronautical prices and the resulting significant differences in valuation would have an important impact on cost-based aeronautical prices (appendix F).

BARA (2000) argued that because the airport would continue to operate as an airport regardless of the return on land, its existing land should be valued at an opportunity cost of zero (it considered new land acquisitions should be included at purchase price). On the other hand, SACL argued that, as a non-specialised asset, the relevant opportunity cost of aeronautical land was market value. Efficiency and distributional arguments have been presented for and against these approaches (appendix F).

Clearly a zero land value fails to provide appropriate signals to Government regarding the potential value of relocating to an alternative airport site and does not give the airport operator (and airport users) the correct signals and incentives for making optimal use of existing airport land. If, due to inappropriate regulatory valuation of land, increased returns obtained from more efficient land use results in regulatory price reductions, there will be no incentive for airport operators to seek out such opportunities. If the potential efficiency benefits of private operation are to be realised in a cost-based regulation framework, an appropriate value and return on land is required.

The ACCC (2001i) considered SACL to be highly constrained in its land use both in regard to sale of the airport and within airport use. It argued that this limited the relevance of alternate use land values in setting regulated prices. In addition, it identified a number of complications in determining the opportunity cost of land for setting efficient aeronautical prices (appendix F).

As a result it adopted an approach of establishing the historical cost of the various purchases of land that went into making up Sydney Airport and then indexing these costs to the present day using the CPI — in effect, maintaining their value compared to an average consumer goods basket. New acquisitions and switches between uses of airport land will be valued at current prices at the time of purchase and then indexed by the CPI. The ACCC considered that this approach would provide appropriate signals for efficient use of the existing site and for new aeronautical investment. However, while this is an arithmetically deterministic approach, it essentially provides an 'arbitrated' solution to land values bound to lie somewhere between the competing claims.

Regardless of perceived constraints that might be placed on the use of airport land, the site's opportunity cost for the community remains its value in the next best use. Pricing based on valuations other than this will mean that signals regarding consumers' willingness to pay for the efficient cost of using the Sydney Airport site for airport services will be obscured.

In addition, other activities in the economy are pricing and operating on the basis of obtaining returns on the opportunity cost of the land they use. If pricing of

aeronautical services fails to take account of such returns, then demand for those services (and demand for other inputs used to produce them) will be inefficiently raised relative to other activities.

For an airport with significant excess demand, the lower production cost-based aeronautical prices resulting from using historical cost land values would give inappropriate price signals. It is likely that the aeronautical prices that would efficiently allocate available capacity at Sydney Airport at certain times of the day already significantly exceed production cost charges based on any feasible land valuation method.

Valuation of Sydney Airport land also raises distributional issues. As the airport is owned by the Commonwealth Government, if land is under-valued, there will be a redistribution from the community at large to airlines (particularly peak period rents) and/or airline passengers.[21] Given that the Government is in the process of selling Sydney Airport, it would seem preferable for aeronautical prices to reflect appropriate land values now and hence be fully incorporated in the sale price received by the community, rather than be adjusted later and possibly provide windfall profits to the private operator.

Price restructuring

In its 1996 and 1998 price notifications for Sydney Airport, the FAC made some restructuring of aeronautical charges in an effort to align more closely revenue from particular aeronautical services with the costs of those services. These changes were relatively simple and involved increases in charges for use of the international terminal while (in 1998) making offsetting large reductions in landing charges. In not objecting to these restructurings, the ACCC strongly supported the move towards user-pays pricing in order to provide appropriate signals for efficient use of airport services and for new investment decisions.[22] BARA, Ansett and Qantas did not oppose the 1998 changes to price structures.

In its recent price proposal, SACL made further changes aimed at aligning prices with costs and also to improve the efficiency of use of congested facilities. The Commission considers that such developments in pricing offer important improvements in the efficiency of use of airport facilities, particularly at an often

21 Some of the peak period rents that accrue to airlines may have supported flights between other cities on which yields may cover marginal, but not average, costs.

22 The ACCC objected to the quantum of the proposed 1996 FAC price increases but not the concept of restructuring prices.

congested facility like Sydney Airport. More flexibility in pricing and operations should help bring forth the greater efficiency benefits from privatisation.

Specific charges for use of facilities, such as aerobridges, provide airport users with the appropriate information for making efficient decisions about consuming particular services. Time-based charges for use of scarce capacity, such as apron space, dissuade excessive use of the facility and encourage more efficient methods of operation, ration existing capacity to those who value it most and provide appropriate investment signals to the airport operator to expand capacity where possible.

SACL also changed the basis of the international terminal charge from a per tonne per landing charge to a per passenger levy and the runway charge from per tonne per landing to a per tonne per movement (landing and take-off). The switch to a per passenger charge reflected the view that terminal costs were more directly related to passenger numbers. By adopting a per passenger charge, SACL effectively has transformed the terminal charge to a short-term marginal cost to airlines when considering attracting additional passengers. In turn, this may affect the extent of airlines' price discrimination aimed at attracting marginal passengers.

The ACCC did not object to any of SACL's proposals aimed at improving the efficiency of the price structure.

SACL indicated that it was considering the possibility of introducing time of day charges and the ACCC has encouraged the development of peak period pricing for Sydney Airport.[23] However, in the absence of peak pricing, the ACCC's discounting of SACL's proposed prices exacerbates the problem of excess demand. To the extent that there already is excess demand for peak period slots, the smaller increase in charges is likely to benefit airlines holding these slots rather than be passed on to passengers travelling at these times.

DRAFT FINDING 8.3

The aeronautical price increases implemented at Sydney Airport place its pricing on a fundamentally different (dual-till) basis from that at other core-regulated airports. The significant range of possible outcomes for a number of cost parameters (for example, land values, cost of capital) indicate the imprecision surrounding regulatory price setting. The excess demand at Sydney Airport at peak times suggests that cost-related or rate-of-return regulation is not appropriate in setting aeronautical charges.

23 Under its conditions of use of Sydney Airport, SACL has, at its discretion, introduced discounts for airlines introducing new services during off-peak periods and for rescheduling services from a peak to an off-peak period.

9 Assessment of current regulation: price monitoring, quality monitoring and access regulation

Current price-cap and price-notification arrangements for aeronautical services provided by core-regulated airports are assessed in chapter 8. This chapter assesses price monitoring of aeronautical-*related* services, another element of the price regulation of airport services. Quality of service provision post-privatisation, particularly ACCC monitoring of quality (established as a complement to price regulation), is also assessed.

Airport services are subject to access regulation and general competition law. Although access regulation does not directly regulate prices of airport services, it does provide for the regulation of terms and conditions, including prices, of access to airport services. This chapter also assesses the regulation of access. General competition law has not been applied to airports to date (see chapter 11 for further discussion of these provisions).

The criteria for efficient regulation (outlined in chapter 4) are used to assess current price monitoring, monitoring of service provision quality, and access regulation.

9.1 Monitoring of prices

Aeronautical-related services at core-regulated airports are not subject to the price cap but are subject to price monitoring pursuant to section 27A of the *Prices Surveillance Act 1983* (PS Act) (chapter 3). The Treasurer explained why price monitoring is considered to be necessary:

> Price monitoring will allow the ACCC to collect data where the airport operator may have scope to exercise market power but where coverage of the services under the more formal price cap arrangements is not considered warranted. Any abuses of market power detected through the prices monitoring arrangements will be the trigger for consideration of stricter forms of prices oversight. (Costello 1998)

The ACCC formally monitors aeronautical-related services, including aircraft maintenance sites and buildings, aircraft refuelling, and check-in counters and related facilities (for a comprehensive list see chapter 3). The ACCC is directed by

the Minister to monitor prices, costs and profits (s. 27A, PS Act) and report to the Minister and the public on that monitoring (s. 27B). Guidelines set out the regulatory information requirements for airport operators (ACCC 1998f).

If monitoring indicates that further investigation is required, the Minister can direct the ACCC to undertake a public inquiry or approve the ACCC holding an inquiry (s. 18). Powers for the ACCC to obtain information for monitoring purposes, including inquiries, are provided under section 32, together with penalties for non-compliance.

Assessment of current price monitoring

The ACCC reports publicly and annually on its monitoring of aeronautical-related services at core-regulated airports. The ACCC has not considered that it need investigate prices of any aeronautical-related services, with the exception of fuel throughput levies (appendix E). This may explain why this inquiry has not received many comments from participants regarding the operation of the current price monitoring system, other than those relating to fuel throughput levies.

The price monitoring process, including the public dissemination of information, may have eased public concern about the potential for operators of privatised airports to exercise market power, and provided assurance that the market is functioning appropriately. The ACCC commented:

> Realistically from time to time there are likely to be areas of the economy where there is considerable public concern about particular pricing outcomes. Government is likely to want to respond to these community concerns. In this situation a price oversight power is required that allows Government to respond. Price monitoring which requires the firm to provide specific cost, profit and price data at regular intervals can be used in the first instance. (sub. 10 to PC 2001c, p. 38)

Price monitoring of aeronautical-related services requires that certain financial information on airport operations be made publicly available, thereby facilitating the transparency of airport performance. While this may have encouraged competitive benchmark comparisons and affected behaviour of some airport operators, this inquiry has not been provided with evidence on these matters.

As noted above, the ACCC, in its monitoring role, has identified no particular monopoly pricing problems apart from the imposition of fuel throughput levies. In this case, the ACCC claimed that such levies represented an abuse of market power on the part of airport operators — this was disputed by airport operators. It recommended that refuelling services be subject to greater prices oversight (appendix E). Although not raised in its regulatory reports, the ACCC (sub. 36) also

expressed concern about another monitored aeronautical-related service provided by airport operators — car-parking charges.

In evidence submitted to this inquiry, the Board of Airline Representatives of Australia (BARA) considered that price monitoring was ineffective in controlling the 'monopoly power' of airports, citing increases in fuel throughput levies and staff car-parking charges as examples of the exercise of monopoly power that price monitoring had failed to curtail (sub. 41).

The preparation of standard information on prices, costs and profits (as set out in the ACCC guidelines) does not appear to have been particularly costly for airport operators as the information requirements are not large. Nonetheless, Sydney Airports Corporation Limited (SACL), operator of Sydney Kingsford Smith Airport (Sydney Airport), commented:

> While the impact of prices monitoring is far less troublesome when compared to the price approval process, it nevertheless does entail compliance costs for both airport operators and the ACCC and experience to date suggests that such cost has generated no net public benefit. (sub. 27, p. 49)

Compliance costs are likely to have been higher where airport operators have been required to comply with additional information requests, including submissions, from the ACCC for its public review of fuel throughput levies.

Costs have also been incurred by the ACCC in administering the price monitoring process, particularly when undertaking its public review of fuel throughput levies.

A contentious issue arising from the current price monitoring process has been the apparent potential for regulatory creep, that is, the gradual transfer of aeronautical-related services from outside the price cap to within it. Regardless of whether additional regulation was warranted (chapter 6), uncertainty has been created for airport operators in not knowing whether monitored services would remain outside the price-cap basket. Moreover, any changes in Commonwealth Government policy relating to the price-cap basket that result in direct adverse consequences for particular parties raise issues of sovereign risk.

The issue of the imposition of fuel throughput levies by airport operators illustrates this potential and its ramifications (appendix E). The ACCC, in exercising its monitoring power under the PS Act, and bearing in mind the Treasurer's 1998 press release (Costello 1998), undertook a review of the imposition of fuel throughput levies by two airport operators. The review was, in effect, an inquiry: a discussion paper was released, submissions were sought, additional information was requested from the relevant airport operators, a report was prepared with conclusions and recommendations, and the report was released to the public and submitted to the

relevant Minister. (Although the review met many of the requirements for an inquiry as set out in the PS Act, the ACCC did not conduct an 'inquiry' under the PS Act.)

The review recommended that refuelling services, including fuel throughput levies, be transferred from monitoring to inclusion within the price cap, even though many airport operators had expectations that fuel throughput levies were to remain outside the price cap. The Commonwealth Government has not responded to the recommendation.

The ACCC approach to car parking and other price monitored aeronautical-related services at Sydney Airport, in its draft response to SACL's proposal to increase aeronautical prices, also illustrates the potential for services subject to price monitoring to become subject to stricter price regulation. Although the ACCC did not recommend that any of these services become subject to prices notification, it noted that, in the absence of a detailed analysis of aeronautical-related services at Sydney Airport, 'above normal' revenues from aeronautical-related services should be taken into account in determining allowable revenue from notified aeronautical services (ACCC 2001h).[1] However, the ACCC did not present evidence of abuse of market power on the part of SACL in relation to any of these services, despite the Treasurer (above) stating that abuse of market power would be the trigger for stricter prices oversight. The ACCC moved away from this draft decision in its final decision, following a Commonwealth Government Direction that revenues from these aeronautical-related services should not be taken into account.[2]

9.2 Monitoring of quality of service provision

Quality monitoring was established as a complement to price regulation. Under price-cap arrangements, airport operators may have an incentive to reduce service quality as a means of cutting costs. Several participants noted that, for this reason, monitoring of service quality by a regulator is essential (for example, International Air Transport Association, sub. 9; Forsyth, sub. 5; Qantas Airways, sub. 48).

Quality of service provision by airport operators

Monitoring by the ACCC of the quality of services provided by airport operators is described in chapter 3. In particular, quality of service monitoring does not apply to

1 As noted in chapter 3, aeronautical-related services at Sydney Airport are monitored under Direction No. 21, pursuant to section 27A of the PS Act, October 2000.

2 Direction No. 22, pursuant to section 20 of the PS Act, 19 April 2001.

services and facilities that are not subject to price regulation, for example, domestic terminals that are operated by airlines.

The ACCC has reported on the quality of services provided by airport operators at Melbourne, Brisbane and Perth airports (Phase 1) since 1997-98, and Sydney Airport since 1998-99. Phase 2 airports were not required to provide quality of service information to the ACCC until the end of 2000-01.[3]

According to the ACCC, in 1999-00 quality of service for the three Phase 1 airports and Sydney Airport was 'generally satisfactory'. Brisbane Airport appeared to rate highest, with airport users (including airlines and passengers) 'very satisfied' with most of the services and facilities provided. For example, passengers rated waiting time at check-in facilities as 'good' to 'excellent', and airlines rated the quality of runways, aprons and taxiways as 'satisfactory' to 'excellent'. Quality remained comparable to previous monitoring periods (ACCC 2001b).

The ACCC reported that Perth Airport users were satisfied with most of the services and facilities provided. However, the ratings varied substantially for some services. For example, the standard of runways was rated from 'very poor' to 'good'. There were marginal declines in the ratings from 1998-99 (ACCC 2001d).

At Melbourne Airport, users were also satisfied although there was a decline in airline satisfaction, for example, with regard to gate allocation (ACCC 2001c). The report for Sydney Airport was similar — users generally were satisfied although airlines were dissatisfied with some services and facilities. Six airlines using Sydney Airport rated gate availability as 'very poor' to 'poor', and seven rated availability of aerobridges as 'very poor' to 'poor'. The ACCC was unable to reach a conclusion on whether service quality had declined from the previous reporting period (ACCC 2001e).

Participants to this inquiry have also commented on the quality of services provided by airport operators. Melbourne Airport operator, Australia Pacific Airports (Melbourne) (APAM), noted that Melbourne Airport had won a number of awards each year from 1997 (sub. 7).[4] SACL stated that it 'provides high levels of quality of service for passengers and airline customers' (sub. 27, p. 33) and recently had completed major improvements, including an upgrade of the international terminal, that had significantly increased service quality. Moreover, it was recently named 'Major Airport of the Year' for 2000 by the Australian Airports Association.

3 *Airports Regulations 1997*.

4 APAM is a wholly-owned subsidiary of Australia Pacific Airports Corporation (APAC).

Qantas, on the other hand, commented that there had been a reduction in the quality of services at some airports, and cited Westralia Airports Corporation, operator of Perth Airport, as an example (trans., p. 262). The airline was also critical of the quality of some services at Sydney Airport, as was BARA, which noted that the baggage handling system at Sydney Airport (international terminal) was considerably worse than those at airports in other countries. BARA was also critical of the quality of particular services at Melbourne Airport (trans., pp. 228–9). However, BARA also noted that anecdotal evidence from members suggested that the quality of services provided by privatised airports had improved (sub. 41).

ACCC monitoring process

Conclusions regarding the quality of services at airports need to be viewed in the context of the process adopted by the ACCC to monitor quality. Several features of the process may affect the robustness of the results.

- Airport operators do not have direct control of many of the services provided at airports. For example, check-in, customs and immigration, cargo processing and on-time airline services are not the sole responsibility of airport operators. Others organisations involved, such as Airservices Australia and Australian Customs Service, are noted in chapter 3. Yet these other services can affect the services provided by airport operators. For example, aircraft delays can be affected by factors beyond the control of airport operators, and passenger perceptions of delays can be influenced by customs processing. This issue is recognised by the ACCC in its regulatory reports.
- To date, ACCC reports on quality appear to place emphasis on survey results rather than on the objective indicators[5] — perhaps because there have been few significant changes in these indicators at airports. Passengers' perceptions are subjective and, as noted above, may be influenced by factors outside the control of airport operators. Surveys of airlines' views also constitute a subjective form of assessment. Although the regulatory reports indicated that there were many favourable responses by airlines about services provided by airport operators (also noted by Qantas, sub. 48), APAM commented:

  > It seems to us that individual airlines use this [airline surveys] as a device to have a 'free kick' at airports and often use it as a forum for a 'pay back' against an airport for taking a particular line in a commercial negotiation. (sub. 7, p. 41)

  The ACCC commented, in respect of its monitoring of Sydney Airport that, at the time of the 1999-00 survey of airlines, 15 of the 23 airline respondents to the survey were taking legal action against SACL (ACCC 2001e).

5 The ACCC's 'static' indicators.

Both SACL and APAM considered the airline responses to be evidence of 'regulatory gaming' (subs 27 and 7 respectively). However, BARA considered that airlines had 'no real incentive to act in this manner' (sub. 41, p. 58).

- The ACCC focuses on changes in airport quality performance and identifies perceived adverse performance (ACCC 1998e). Quality performance assessment of the objective indicators by the ACCC may be misleading depending on how the ACCC interprets a change in these indicators. For example, a reduction in the number of aerobridges at an airport may be viewed as adverse performance if it is assumed that more is better than fewer and that all airport users desire the same high quality levels. However, this may not be the case. Some airport users will negotiate higher price/higher quality service outcomes, while others will prefer to pay less for lower quality (lower cost) services. For example, Virgin Blue, a low-fare airline compared to Qantas, prefers more basic services and facilities (for example, no aerobridges) to match its customer profile. The highest quality is not necessarily the most desirable or the most efficient. The surveys of passengers and airport users are likely to account better for differences in quality preferences.
- Airport operators may be undertaking maintenance or building work which temporarily disrupts operations and affects service quality. This is not necessarily taken into account in the ratings, although the ACCC does make a note of such issues in its reports.
- There are some technical problems with airline and passenger surveys. For example, as BARA noted, responses from airlines that rarely use an airport are given equal weighting to major user airlines (sub. 41).

Assessment of quality outcomes

There is little evidence to indicate that the *overall* quality of service provided by operators at Phase 1 airports has deteriorated under the price cap since privatisation.

As noted in chapter 7, airport operators have some strong incentives not to reduce service quality, particularly if passengers and airlines are highly sensitive to quality levels. Related to this are an airport's commercial, and especially retail, operations, which are an important, and increasing, source of airport revenue. The success of these depends heavily on growth in passenger traffic and the provision of an environment conducive to retail spending by passengers. Neither is likely to be achieved by a deterioration in aeronautical service quality. However, BARA commented that airports have an incentive to reduce the quality of services and cited, as an example, Sydney Airport's investment in additional remote gates that reduced costs for the airport but increased costs for the airlines (sub. 41). In this

regard, it is informative to note that Sydney Airport faces different incentives to other core-regulated airports because it is constrained by limited airside space.

Airports operators are at the commencement of long-term leases — 50 years with an option to renew for a further 49 years. If airport operators have long-term goals of commercial viability, the deliberate running-down of the quality of existing assets in the short run may not enhance that viability. One of the key objectives of Australian Airports (Townsville) in its Townsville Airport 2018 Master Plan is to improve service quality (sub. 14). Under the Phase 1 and Phase 2 lease agreements, any developments at an airport, such as extending a building or constructing a road, must have regard to 'reasonably expected' quality standards, and there are procedures to address non-compliance.

Several participants (for example, the Australian Airports Association (sub. 15) and Northern Territory Airports (sub. 25)) commented that investment at airports had been impeded by the regulatory regime in relation to necessary new investment (NNI), and hence had restricted potential improvements in service quality. In other words, future quality levels may be affected by application of current regulatory arrangements. (Chapter 8 discusses the effect of the ACCC's implementation of NNI provisions on investment by airport operators.)

Assessment of ACCC monitoring

As noted above, both BARA and APAM were critical of various aspects of the current quality monitoring arrangements. BARA commented that the process is 'ineffectual' and both also noted that the ACCC did not appear to use much of the information collected. BARA supported APAM's suggestion that:

> If quality of service monitoring is to be a feature of any future regulatory system, which we believe it should, the scope of monitoring and its objectivity needs to be seriously examined. Any new set of arrangements must be auditable, systematic (rather than ad hoc and anecdotal), and possess safeguards against gaming. (sub. 7, p. 41)

ACCC monitoring relates to movements in indicators of quality, rather than standards.[6] ACCC monitoring therefore makes no judgement about the absolute level of quality, leaving this as a matter of commercial negotiation between airport operators and users. The Commission considers this to be appropriate but, as mentioned above, there is likely to be a judgement implicit in the monitoring assessment process that higher quality of service provision is preferable to lower quality.

6 For a discussion about quality monitoring and standards see CAA (2000d), and Betancor and Renderio (1999).

Several airport operators (for example, APAM, Brisbane Airport Corporation (BAC) and SACL) commented that, in the absence of ACCC monitoring, they would undertake their own monitoring of service quality because it is considered to be good business practice. APAM stated that 'quality of service monitoring is important and even if the law did not require it, Melbourne Airport would undertake it in some form or other' (sub. 7, p. 40). APAM and BAC use the information obtained from monitoring to help identify areas for improvement in discussions with airlines.

In the United Kingdom, even though there is no regulatory obligation to monitor service quality, BAA plc (part-owner of APAM), undertakes its own quality of service monitoring, including extensive passenger surveys, to monitor trends in quality and to enable identification of problem areas in need of remedial action (CAA 2000d).

The ACCC monitoring process imposes compliance costs on airport operators, including direct staff costs, costs associated with outsourcing of passenger surveys, and the cost of overheads. These costs appear to be modest at major core-regulated airports. APAM noted that 'the marginal regulatory cost is well below the full cost' because, as noted above, it would undertake quality of service monitoring in any event (sub. 7. p. 42). The annual regulatory cost is likely to be of greater significance to the smaller Phase 2 airports, such as Alice Springs and Launceston — information for the first year of quality monitoring (2000-01) is now due to the ACCC.

Although there are some problems with the effectiveness and robustness of ACCC quality monitoring, the public dissemination of information on service quality by the airport operators and the ACCC appears to be a positive feature of the monitoring process. Transparency of reporting can encourage airport operators to improve service quality and can form a basis for improved consultation and negotiation between airport operators and users. From the perspective of airport operators, the public nature of the monitoring process can provide a credible source of evidence about service quality. Moreover, comparisons of quality ratings between airports may facilitate competitive pressure between operators to improve service quality.

DRAFT FINDING 9.1

The overall quality of service provision by airport operators at monitored airports does not appear to have deteriorated since monitoring commenced. This outcome reflects to a large extent the commercial incentives airport operators have not to reduce service quality.

Although there are some problems with the ACCC monitoring process, it provides transparency of reporting and facilitates some comparison between airport operators at relatively low cost.

For ACCC monitoring of service quality to be as effective and efficient as possible, it is important that its process and outcomes are:

- clear, consistent and timely;
- objective without being unduly prescriptive;
- accessible and transparent;
- statistically accurate and reliable; and
- mindful of compliance costs.

9.3 Access regulation

While access regulation does not directly regulate the prices of airport services, it does provide for the regulation of the terms and conditions — including price — of access to the services of essential facilities. Thus, the prices of airport services can be regulated indirectly through access regulation. Access regulation as an alternative or supplement/complement to direct price regulation of airports is discussed in chapter 11.

Two separate legislative instruments provide for access to airports — an airports-specific instrument (section 192 of the *Airports Act 1996*, which applies to privatised core-regulated airports), and a general instrument (Part IIIA of the *Trade Practices Act 1974* (TP Act), which potentially applies to all airports). These regimes are described in chapter 3. In this section, the application of these access regimes to airports is assessed. The position paper of the Commission's concurrent inquiry into the national access regime (PC 2001a) provides a detailed discussion of Part IIIA.

Although the objectives of section 192 are not enunciated in the Airports Act, the second reading speech for the Airports Bill suggested the primary policy intent was to facilitate access for new passenger airlines (HoR, 23 May 1996, p. 1308). That

the Commonwealth Government introduced an airports-specific access regime for privatised airports suggests it considered the Part IIIA provisions would not adequately facilitate access to the services these airports provide. However, as Part IIIA was in its infancy when section 192 was introduced, the basis for the Government's concerns is unclear. Indeed, Part IIIA has been used to gain access to airport facilities (see below).

Undertakings

Section 192 provides for airport operators to lodge undertakings setting out the terms and conditions under which access to airport services will be provided with the ACCC (chapter 3). However, lodgement of undertakings has been limited (box 9.1).

Box 9.1 Access undertakings

Melbourne and Perth airports — the only airports to submit access undertakings during the designated period following privatisation — submitted draft undertakings to the ACCC in early 1998. The undertakings covered a range of services within and outside the price cap. Both undertakings committed to providing access at prices consistent with the price cap for capped services, and at prices determined by the airport operator or through negotiation between the parties for services outside the cap. The undertakings also established mechanisms for dispute resolution.

The ACCC did not accept either draft undertaking. In the case of Perth Airport, the ACCC expressed concerns about the enforceability of the undertaking, the adequacy of information provided to access seekers as part of the negotiation process and the dispute resolution provisions. In relation to the Melbourne Airport draft undertaking, the ACCC was concerned about the enforceability of the undertaking, pricing for services outside the price cap and the limited scope for negotiation. Neither airport pursued lodgement of an undertaking beyond this point.

Sources: ACCC (1998c, d; 2000a, e).

Australia Pacific Airports Corporation (APAC) stated that it did not pursue lodgement of an undertaking beyond the draft stage because:

> … we had formed a view that any undertaking that would be acceptable to the ACCC would actually leave us in a worse position than if we were to be subject to declaration and subsequent arbitration. This was particularly the case where the ACCC was seeking an undertaking that effectively extended into operational and commercial areas not intended to be subject to Part IIIA. (APAC 2000b, p. 4)

The ACCC's rejection of the draft undertakings submitted by Melbourne and Perth airports may have discouraged other airport operators from submitting undertakings. SACL stated:

> The experiences of Melbourne and Perth airports in (unsuccessfully) pursuing access undertakings resulted in no Phase 2 airports even attempting this route. The costs, uncertainty and ultimate lack of flexibility have been factors in the deterrent. SACL has similarly investigated the resources required to complete a successful Part IIIA Undertaking and decided it is too onerous and uncertain to warrant pursuit. (sub. 27, p. 46)

Airport operators' ability to offer undertakings for some facilities was also limited by other factors. For example, airport operators were not in a position to offer undertakings for those domestic terminals for which long-term leases were held by incumbent airlines (chapter 3).

The relatively short period in which undertakings could be lodged (12 and 24 months following privatisation for Phase 1 and 2 airports respectively), at a time when airport operators were also required to develop draft airport master and environment plans (chapter 3), and the fact that there is no scope for appeal against an ACCC decision not to accept an undertaking, may also have been factors contributing to the limited use of the undertakings provision.

As no undertakings were in place at the end of the designated period, airport services at privatised core-regulated airports were declared automatically. Rather than listing declared services, criteria for declaration of services were specified in the legislation (chapter 3). The ACCC determines whether a given service is declared under section 192 following a request for a determination from an access seeker.

Access determinations

To date, application of the access provisions to airports has been limited. Delta Car Rentals (Delta) and Virgin Blue have sought determinations that services at Melbourne Airport are covered by the automatic declaration of 'airport services' under section 192, while Australian Cargo Terminal Operators (ACTO) sought declaration of various services at Melbourne International Airport (MIA) and Sydney International Airport (SIA) under Part IIIA (box 9.2).

Box 9.2 **Application of access regulation to airports**

Section 192

Delta Car Rentals

Delta Car Rentals (Delta) operated an off-airport car rental service and short- and long-term car parks close to Melbourne Airport, and provided a shuttle bus service to transport passengers to and from the terminals. (Delta acquired National Car Rentals and signed a licensing agreement with Europcar International in late 2000. It now operates an on-airport car rental service and an off-airport car-park service.) When Melbourne Airport was operated by the Federal Airports Corporation (FAC), Delta paid a fee per car rental for access and operated from the landside drive area adjacent to the terminals. The terms and conditions of access offered by APAM following privatisation required Delta's car rental operation to pay a turnover-based access fee and to operate its car rental service from the designated meeting point (DMP) in the car park opposite the terminals. While a reduced turnover-based access fee was agreed through commercial negotiation between the parties, Delta did not accept the airport operator's requirement that it operate from the DMP. On 21 October 1998, Delta requested that the ACCC make an access determination for the service of 'the landside drive area to pick up and drop off passengers'.

On 17 May 1999 the ACCC determined that the service of 'the provision of landside roads and associated vehicle facilities for dropping off and picking up passengers at Melbourne Airport' is a declared airport service under section 192. Neither party has sought arbitration of the terms and conditions of access to the service. The declaration will expire on 1 July 2002, when the Minister's determination under section 192 that airport services at the airport are declared for the purpose of Part IIIA expires.

Virgin Blue

On 2 March 2001, Virgin Blue lodged an application with the ACCC for a determination that the service of 'the use of the multi-user domestic terminal (MUDT) for the purposes of processing arriving and departing domestic airline passengers and their baggage at Melbourne Airport' is an airport service. The application followed negotiations over the terms on which Melbourne Airport would grant Virgin Blue access to the MUDT on a long-term basis.

The ACCC is currently considering the matter.

(Continued next page)

Box 9.2 (continued)

Part IIIA

Australian Cargo Terminal Operators

On 6 November 1996, ACTO — a provider of cargo terminal services to international airlines — sought access to various freight handling and related services provided by facilities owned by the FAC at MIA and SIA. These included the services provided by freight aprons and hard stands needed to load and unload international aircraft, areas for moving and handling freight, equipment storage areas, and land to construct cargo terminals.

The National Competition Council (NCC) recommended on 8 May 1997 that the services provided by the freight aprons, hard stands and freight moving and equipment storage areas at MIA and SIA be declared. It recommended declaration of the services at SIA for a period of five years, and declaration of the services at MIA such that declaration expired 12 months after leasing (to allow an undertaking to be lodged during the designated period under section 192). The NCC did not recommend declaration of land for constructing cargo terminals at either airport as it considered ACTO could construct cargo terminals off-airport. The Treasurer accepted these recommendations and declared the services on 30 June 1997. The declaration of services at MIA expired on 1 July 1998.

The FAC and, subsequently, SACL, applied to the Australian Competition Tribunal for a review of the Treasurer's declarations at SIA. It proposed the adoption of a tender process to allocate rights to provide ground-handling services as an alternative to declaration. The Tribunal handed down its decision affirming the Treasurer's decision to declare the services on 1 March 2000. The declarations at SIA are effective from 1 March 2000 to 28 February 2005. The ACTO declarations are the only declarations made under Part IIIA in any industry to date.

Sources: ACCC (1999a, d; 2001j); ACT (2000); NCC (2001); PC (1998a).

Issues arising from access determinations

Although determinations under the access provisions to date have been limited, they provide some insights into interpretation of the criteria by regulators and the courts, compliance costs and declaration processes.

Delta determination

As outlined in box 9.2, Delta sought access to the landside drive area adjacent to the terminals, while APAC argued that Delta should operate from the designated meeting point:

> A key obligation for an airport operator is to efficiently manage the differing requirements of airport customers in a way that ensures the good order and management of traffic flow in and out of the airport … In order to ensure that the airport forecourt operates safely and without unacceptable congestion certain categories of users (buses, taxis, limousines, and, now, off-airport car rental courtesy buses) are required to use specific facilities outside the scope of general public roads. It is the case that other off-airport car rental companies are currently utilising the DMP [designated meeting point area] in a satisfactory manner. (APAC 1998, pp. 5–6)

The ACCC considered that Delta's definition of the service as 'the landside drive area to pick up and drop off passengers' was too narrow. It therefore used its powers under sections 192(4A) and (4B) to define the service as 'the provision of landside roads and associated vehicle facilities for dropping off and picking up passengers at Melbourne Airport', where 'landside roads and associated vehicle facilities include landside roads, roads through carparks, kerbside parking areas, the designated meeting point area (accessed via the carpark road) and any other vehicle access facilities' (Commonwealth of Australia Gazette, No. GN 25, 23 June 1999, p. 1864).

A number of submissions to the ACCC investigation argued that this broader definition was inappropriate, including BAC, Budget Car Rentals, Avis Australia and Ansett. By broadening the definition of the service to include substitutes for the landside drive such as the DMP, the question becomes whether landside access to the airport, rather than access to the landside road outside the terminal, is necessary for operating and/or maintaining civil aviation services at the airport. Thus, it is arguable that broadening the definition of the service in the Delta determination resulted in the service meeting the section 192 declaration criteria when it otherwise may not have done so. Nevertheless, in April 1999 the ACCC determined that the service was a declared airport service (ACCC 1999d). APAC (2001) suggested in a submission to the national access regime inquiry that, if declaration had been sought under Part IIIA, it is unlikely that the application would have met either the competition test or the national significance test.

ACTO determination

The ACTO declarations at MIA and SIA under Part IIIA (box 9.2) illustrate that the Part IIIA declaration criteria tests are also open to interpretation. While ACTO sought access to various freight handling and related services, the NCC and

Australian Competition Tribunal found that the relevant facilities providing those services were the whole of MIA and SIA. Thus, it was these facilities that were judged against the natural monopoly and national significance tests. Had the relevant facilities been defined more narrowly, they may not have passed these tests.

The ACTO declarations also raised a number of other issues relating to the interpretation of the Part IIIA criteria.

Criterion (a) requires that access (or increased access) to the service would promote competition in at least one market other than the market for the service. In assessing ACTO's request for declaration of services at MIA and SIA, the NCC was of the view that it was not necessary to promote competition substantially in order to meet this criterion (NCC 1997). In its review of the declarations at SIA, the Australian Competition Tribunal considered that criterion (a) would be satisfied if declaration created the environment for improving competition rather than the stricter interpretations that declaration would need to promote competition directly, or that access is essential to competition (ACT 2000).

A number of participants in the national access regime inquiry expressed concern that this interpretation could extend the application of access regulation. The Productivity Commission has suggested in its position paper on the Review of the National Access Regime that the SIA declarations indicate 'that criterion (a) can be satisfied in a manner that leads to access being granted in instances where it would promote only a marginal increase in competition with potentially ambiguous efficiency effects' (PC 2001a, p. 131).

Criterion (b), which requires that it would be uneconomical for anyone to develop another facility to provide the service, is generally considered to test for the existence of natural monopoly characteristics. However, in a submission to the national access inquiry, the Law Council of Australia (2001) expressed concern that attempting to express an economic concept in lay terms has led to much debate about its meaning, and thus criterion (b) could extend beyond natural monopolies.

Indeed, the ACCC implied that the criterion:

> … extends beyond the natural monopoly case to natural duopolies or oligopolies, that is, where there are already two (or more) facilities but it would be uneconomic to develop another one. (ACCC 2000e, p. 71)

In the position paper for its review of the national access regime, the Productivity Commission considered that declaration should be confined to natural monopolies (PC 2001a). As noted above, the interpretation of the relevant facilities as the whole of MIA and SIA increases the likelihood that criterion (b) can be satisfied.

Criterion (c), which requires that the facility is of national significance, aims to ensure that only facilities with a significant role in the economy fall within the scope of Part IIIA (PC 2001a). The Law Council of Australia (2001) expressed concern that the significance criterion is linked to the facility, rather than the effect on competition or the service being declared. Thus, in the case of the ACTO declarations, it could be argued that while the facilities concerned — MIA and SIA — are of significance, the declared services are not.

The NCC has stated that it regards criterion (f) — that access (or increased access) to the service would not be contrary to the public interest — as the main vehicle for assessing impacts on economic efficiency (NCC 2001). However, the Productivity Commission (2001a) in its position paper expressed concern that there is a risk that services may be declared where the effect on efficiency is minor because there is nothing in the wording to ensure the public interest test is interpreted in the manner adopted by the NCC. In the case of the SIA declarations, it does not appear that the Australian Competition Tribunal assessed the likely impacts of declaration on economic efficiency when addressing this criterion.

The SIA declarations under Part IIIA (box 9.2) also illustrate that there is scope for considerable delays in the declaration process. ACTO applied to the NCC for declaration of a number of services at SIA in November 1996. While the Minister declared the services approximately eight months later, the FAC applied to the Australian Competition Tribunal for a review of the decision. The Tribunal handed down its decision affirming the declarations on 1 March 2000 — more than three years after ACTO's application. The administrative and legal costs of these declarations are likely to have been significant, though in so far as precedents have been determined, these costs should not all be attributed to this specific case.

Summary

The limited use of section 192 to date makes it difficult to assess its contribution to providing access at privatised core-regulated airports. The Delta determination supports the view that the section 192 declaration criteria are somewhat less stringent than the Part IIIA criteria. Whether airports warrant continuation of special access provisions is discussed in chapter 11.

The extent to which automatic declaration of airport services and relaxation of the declaration criteria under section 192 may have contributed to the achievement of the Commonwealth Government's stated objective of facilitating access for new domestic passenger airlines is open to question. Domestic terminal lease agreements require incumbent domestic airlines, on application, to make some gates at their terminals at some core-regulated airports available to new entrants (chapter 3).

However, the likelihood that new entrants will apply for access to these gates has been reduced by the agreement by operators of a number of airports to develop new domestic common-user terminal facilities for use by new entrants. (Brisbane Airport already had common-user facilities.) The potential for increased passenger throughput may have provided the incentive to develop these facilities, coupled with scope for charging for these facilities under NNI provisions. If airport operators had not developed common-user terminal facilities, incumbent domestic airlines (as lessees of domestic terminals) rather than airport operators, are more likely to have been subject to access determinations. This suggests that section 192 is unlikely to have been instrumental in facilitating access for new domestic passenger airlines.

DRAFT FINDING 9.2

Though privatised core-regulated airports have facilitated access for new entrant airlines, airports-specific access provisions (section 192) do not appear to have been instrumental in achieving this outcome.

The successful use of Part IIIA by ACTO to obtain access declarations at MIA and SIA also demonstrates that the general access provisions can be used to gain access to airport services. However, as noted above, these declarations have led to concern about interpretation of the Part IIIA criteria, and the Productivity Commission in another inquiry has recommended somewhat stronger declaration thresholds (PC 2001a).

10 Regulatory options: cost-based and incentive regulation

Under the terms of reference, the Commission is required to identify and assess alternatives to current regulation. In this and the following chapter, the main regulatory options are explored. This chapter outlines cost-based and incentive regulation options. Further, issues relating to the form and implementation of a price-cap regulatory regime are discussed. Issues concerning the coverage of regulation — relating to single-till and dual-till regulation — also are discussed. Chapter 11 assesses other regulatory options: prices monitoring, and access and anti-competitive conduct regulation, including price undertakings and commercial agreements.

10.1 Cost-based and incentive regulation

Cost-based regimes have a long history in the United States, the most common being rate-of-return regulation. Incentive-based regulation — including price caps[1] and benchmark regulation — was developed partly in response to the problems of cost-based regulation.

Cost-based and incentive regulation are discussed below, as are the relative merits and disadvantages associated with these approaches to regulation, and the options available for stricter price regulation of airports in Australia.

Cost-based regulation

Cost-based regulation sets prices with direct reference to the costs of the regulated firm. Although there are other types of cost-based regulation,[2] rate-of-return regulation dominates. The implementation of rate-of-return regulation involves the

1 The term 'price cap' covers a multitude of regulatory regimes, including where the firm has all prices subject to a strict price ceiling with no adjustment process. The process described here is based on the Littlechild (1983) RPI-X form of the price cap.

2 For example, return-on-cost allows the firm to charge a specific mark-up over total costs.

regulator imposing a 'fair'[3] return on capital assets and then setting prices to deliver this outcome.

The objective of rate-of-return regulation is to ensure that prices are set at a level that allows ongoing supply of the goods or services in question by the regulated firm, but which are not so high as to generate excess profits.

Though cost-based regulation could promote efficient pricing, in practice it has several disadvantages:

- the regulator, based on information provided by the regulated firm on its projected operating and capital costs, asset base and projected sales must determine what constitutes a 'fair' rate-of-return (including an assessment of risk), and whether the operations and proposed investment are efficient and then determine appropriate unit prices over the regulatory period;
- the regulated entity may tend to use more capital than if it were unregulated. If the allowed rate-of-return is set above the cost of capital, the firm has an incentive to expand the capital base to increase profitability.[4] This is known as the Averch-Johnson (A-J) effect;[5]
- the last point also means that the regulated firm may have an incentive to use an inefficient mix of inputs in production, resulting in an inefficiently high capital/labour ratio that, in turn, results in higher production costs for a given amount of output;
- information asymmetry between the firm and regulator is significant, providing an incentive for cost-padding by the firm including, for example, high labour costs;
- the prices for each good or service often are set individually such that price equals cost. This requires the allocation of any common costs.[6] This essentially arbitrary process may increase efficiency losses by moving away from more

3 'Fair' is commonly used to describe a desired rate-of-return for the industry and includes a risk-adjusted return on capital.

4 There may be other reasons for the monopolist to over-invest, for example, preemptive investment to discourage new entrants.

5 After Averch and Johnson (1962), who first analysed the problem. For this result to hold, the 'fair' rate of return must be above the cost of capital. It has been noted by Kahn (1988) that the A-J effect may offset the effects of under-investment due to monopoly and encourage risk-taking and output-expanding investment.

6 Common costs may be allocated in a variety of ways, including according to revenue and output shares though essentially any allocation is arbitrary. The relative merits and problems of allocating common costs are discussed by Europe Economics (2001).

efficient discriminatory pricing that recovers common costs most from where demand responds least to price;

- rate-of-return regulation which ties prices to costs incurred by the firm (and not congestion costs incurred by users) may not be appropriate where there is congestion and new facilities need to be built — efficient pricing needs to be linked to opportunity costs; and
- the risk of any investment may be borne largely by customers, as the regulated firm (depending on the rate-of-return allowed by the regulator) is able to pass through costs into higher prices.

The fundamental problem with rate-of-return regulation is that, because the regulation is effectively cost-plus and because prices are typically re-set on an annual basis, the regulated firm will not benefit from cost-reducing changes as resulting savings (if any) are passed through to the customer.

There have been attempts to improve outcomes of cost-based regulation. Benchmarking techniques have been applied to overcome information problems inherent in rate-of-return regulation, though with limited success (discussed below). Another approach has been profit sharing (or sliding scale) regulation which is a variant of rate-of-return regulation. In this approach, after the profit results have been calculated for a designated period, any excess profits or profit shortfalls are shared with the customers. This can be done through either refunds or future price adjustments. These types of regulation are designed to narrow the gap between costs and revenues, thereby increasing allocative efficiency without adversely affecting the incentives for cost reduction that improves productive efficiency. A profit-related sliding scale would require an explicit rate-of-return mechanism, hence the information requirements can be cumbersome.

Incentive-based regulation

In view of the poor incentive for productive efficiency of cost-based regulation, other forms of regulation have been developed. These attempt to provide regulated firms with appropriate incentives for efficient supply and price structures, while at the same time encouraging firms to implement efficient price levels (and earn normal profits) over time.

As summarised by Vogelsang:

> … [incentive-based regulation] means that the regulator delegates certain performance-related decisions to the firm and that the profits of the regulated firm depend on performance measures of the regulator. Incentive regulation makes use of the firm's

information advantage. The regulator thus controls less behavior but rather rewards outcomes. (Vogelsang 2001, p. 1)

Price caps are the main incentive mechanism used by regulators, though there are many variations that fall under the price cap banner.

Price caps have their theoretical basis in the work of Vogelsang and Finsinger (1979) (box 10.1), with Littlechild developing a practical method for the implementation of price caps in 1983 for the UK telecommunications industry.

Box 10.1 **Vogelsang and Finsinger and Ramsey pricing**

Economic efficiency generally requires that prices should reflect marginal costs. However, as airports have natural monopoly characteristics and substantial common costs, pricing at marginal cost is not feasible. A desirable objective in this situation is to price to cover average costs but in a way that has the least efficiency reducing effect. A standard economic solution in multi-product firms has been to implement 'Ramsey pricing', where the setting of prices reflects the inverse of the demand elasticity for the good or service. Thus, the less price responsive the demand for the good or service is to price changes, the higher the price.

Vogelsang and Finsinger (1979) proposed a method where a firm, under certain assumptions, will set prices that satisfy Ramsey pricing conditions and earn sufficient revenue to stay in business. This mechanism allows firms to choose their own price structure as long as the firm remains within a certain average price level for their basket of goods or services. Based on this theoretical approach, Littlechild (1983) developed price caps as commonly applied in the United Kingdom.

A price cap specifies the maximum price for a good or service over a certain period. Typically, price increases are constrained to a level determined by an index — commonly the rate of inflation (which serves as a proxy for exogenous rises in the prices of inputs) — minus an X factor that (predominantly) accounts for expected productivity improvements in the regulated firm relative to the economy-wide average. Any cost savings beyond the CPI-X adjustment accrue to the firm in any given regulated period.

The major advantages of CPI-X are:

- CPI-X is less susceptible to the risk of over-capitalisation by the firm and the inherent incentives for productive inefficiency of cost-plus regulation. As the regulated firm has the right to retain profits during the designated period, there is an incentive to produce as efficiently as possible and to increase sales (and thus, if there are economies of scale, reduce unit costs). Some of these benefits will be shared with consumers via the setting of the X.

- CPI-X allows for the adjustment of prices of goods and services being regulated, subject to the requirement that the weighted average increase in prices of goods and services in the 'basket' is within the cap. This allows for flexibility in pricing, including Ramsey pricing (box 10.1), and adjustment to accommodate consumer tastes and preferences, leading to a gain in overall efficiency that can benefit both consumers and producers.
- The risk of investment, in principle, is shared between the regulated firm and its customers, because a rate-of-return is not specifically guaranteed.
- Price caps are forward looking in that they encompass forecasts of expected productivity gains as well as future demand and cost levels.

However, as with cost-based regulation, practical application of price caps generates a range of difficulties.

A major practical issue is that, if prices are to move towards efficient levels over time, the Xs must be reset at regular intervals with reference to the costs of the regulated firm (including a reasonable rate-of-return on assets). In other words, there is a tendency for price caps to converge over time to cost-based, rate-of-return regulation, with many of the associated incentive problems of that form of regulation. One option is to set starting prices and/or the Xs without reference to the costs or rate-of-return of the firm, but this approach could have serious consequences if prices were to move too far away (lower or higher) from efficient levels.

Typically, therefore, price-cap regulation is applied with regular reference to actual costs of the firm (and/or costs of other firms in the industry — see below). Box 10.2 briefly outlines the building block approach to assessing allowable costs used by the ACCC to determine 'efficient' prices. When there is regular reference to the costs of the firm, the essential remaining difference between cost-based and price-cap regulation is the interregnum offered to the regulated firm during the set regulatory period, during which time it can retain profits arising from cost savings beyond those incorporated in X values. But, viewed in this way, price-cap regulation is cost-based regulation with longer lags: if a price-cap regime were reviewed yearly with resetting of prices or adjustment of the X factor related purely to the costs of the firm, then the two regulatory regimes — and their outcomes — would be indistinguishable.

Box 10.2 Regulatory determination of 'efficient' prices

Determination of allowable prices is a difficult task. The ACCC has recommended an 'accrual building block' approach, based on forecasts of the cost of service over the regulatory period. The maximum allowable revenue (MAR) is a sum of the projections of the return on capital, depreciation and operating and maintenance expenditure. Having determined the level of costs, allowable prices are determined after forecasting the level of demand for the airport's services. While estimating operating and maintenance expenditure is relatively straightforward, the assessment of the other components requires difficult judgements. Some of the major decisions to determine the MAR are outlined below:

- Assets (other than land) valuation — asset values are part of the process in determining the allowance for depreciation charges and the return on capital. The cost of capital will be applied to the depreciated asset base to determine the revenue required to compensate for the opportunity cost of funding the assets. There is no uniformly accepted approach to the valuation of assets. The ACCC recommends that a replacement cost method — depreciated optimised replacement cost valuation (DORC) — be used, however an historical cost approach — such as depreciated actual cost (DAC) — may be appropriate for firms where costs are relatively stable over time.
- Land valuation — land is not well suited to a DORC valuation as it does not depreciate and is not subject to technological obsolescence. For airports, the valuation of land is particularly important due to the relatively high proportion of land in airport total assets. Opportunity cost and historical cost are two approaches that have been used by regulators to value land. These two approaches can generate very different land valuations and hence allowable revenue and prices. The historical cost approach used by the ACCC in the valuation of land for Sydney Airport, resulted in a land valuation significantly below the opportunity cost valuation proposed by Sydney Airports Corporation Ltd. As opportunity cost — the next best use — is not directly observable, there are several approaches to estimating the opportunity cost of the land, that all require difficult conceptual and practical issues to be resolved. Nonetheless, an estimate of opportunity cost of the land generally remains the appropriate approach to land valuation for price regulation though, for the airport as a whole, this will undervalue airport land where access to the airport is restricted by capacity (appendix F).
- Weighted average cost of capital (WACC) — estimates the required rate of return to be earned by debt and equity providers. Whilst the debt costs to a firm are relatively straightforward to assess, the required rate of return for equity is not. The capital asset pricing model (CAPM) is widely used. This method requires the measurement of two contentious variables: the beta (a measure of the risk of the firm relative to total market risk) and the market risk premium.

Sources: ACCC (1999c; 2001i); PC (2001a).

Thus, if the review periods for a price-cap regime are short, the incentives for cost reduction are limited as prices closely track actual costs. If the review periods are longer (say 3–5 years), then the incentive to reduce costs by the regulated firm — particularly early in the period — is stronger as it can retain part of the profit resulting from any cost-saving measures. (This assumes, of course, that the regulator does not intervene within the designated regulatory period and that the resetting of the price caps is always forward looking.) However, as the price-cap review is approached, there is an incentive for the airport to inflate costs, in order to obtain a lower X over the next period.

Another significant potential problem with price caps relates to the maintenance and/or improvement of quality. Due to the structure of price caps, there generally is an incentive to run down existing assets and degrade quality. With a price cap in place, a firm may have an incentive to implement cost reductions at the expense of service quality. Thus, price-cap regulation typically is complemented by monitoring of service quality to ensure standards do not deteriorate.

An increase in quality usually requires an increase in labour and/or capital expenditure. However, when the firm is subject to a price cap, it may not be able to recoup all of the extra costs via higher prices. The regulated firm may gain additional revenue from increased sales, but this may or may not be enough to compensate for the extra costs incurred. Thus, price caps normally are complemented by specific provisions to accommodate quality-enhancing investments.

Price caps also are unlikely to lead to efficient pricing of congested facilities. In particular, in calculating X values, the costs used are those incurred by the firm, not the costs imposed on others in the form of congestion. Efficient prices are those that would allocate the scarce services to those who value them most highly, not prices determined by incurred costs or even 'opportunity' costs that reflect another (non-airport) use (appendix F).

Finally, price caps, when they are fixed for other than a short term, are not flexible. If the demands faced by the airport are changing rapidly there is a risk that the airport might be forced to depart from an efficient pricing structure.

As concluded by the Motor Trades Association of Australia Superannuation Fund (MTAA Super Fund):

> … when the firm is already operating relatively efficiently, demand conditions are changing rapidly and unpredictably or the price cap is applied to preserve low or negative levels of profitability, there is a strong likelihood that the controls and the X factor will cause the firm to set prices that generate worse outcomes than might have arisen without direct prices oversight. (sub. 22, p. 18)

Forms of price caps

There is a range of options available for the implementation of a price-cap regulatory regime. Some of the options are discussed below.

Revenue yield versus tariff basket

In the United Kingdom, regulation of airports uses a revenue yield approach to price caps (box 10.3) — airport charges are capped by reference to the revenues generated per passenger. The main alternative is the current system used in Australia that is sometimes referred to as the 'tariff basket' approach.

Box 10.3 Tariff basket and revenue yield price caps

In determining the weighted average index for prices, two approaches are commonly taken. The current approach in regulating Australian airports is to use the 'tariff basket' approach. The tariff basket uses a weighted sum of prices based on revenue shares in the previous period.[7] The regulated firm is restricted to increasing the weighted sum of prices by the CPI-X factor each period. Within the basket, the firm is able to increase or decrease individual prices for goods or services by as much as it wants, as long as the prices do not violate the weighted sum price cap.

In the United Kingdom[8] and in Europe, some airports are subject to a different regime, referred to as the 'revenue yield' approach. The price cap is based on a maximum allowable revenue yield per passenger. The revenue yield per passenger is calculated by dividing total revenue for aeronautical services by the number of passengers. This results in the maximum revenue yield per passenger that the airport is allowed to earn. The target revenue yield per passenger can be calculated by using the previous period's revenue and passenger figures or, as in the case of the United Kingdom, forecast revenue and passenger figures. The airport can then set the prices for aeronautical services so as not to exceed the maximum average revenue yield per passenger. Like the tariff basket approach, prices for individual airport services can be set freely by the airport as long as the average revenue constraint is not exceeded. The regulated firm is restricted to adjusting the maximum average revenue per passenger in each period by CPI-X.

Each approach has advantages and disadvantages.

- The revenue yield approach tends to be more flexible, because there are no constraints on the charges that can be levied, provided the airport adheres to the

7 The Vogelsang-Finsinger mechanism bases the weighted sum of prices on the previous year's costs rather than revenue.

8 Note that, in the United Kingdom, airports are regulated under a single-till regime.

average revenue constraint. Introducing new charges is relatively straightforward. Implementing new charges within a tariff basket requires re-weighting the basket of prices. As the weights normally are determined using the previous year's revenue, to implement a new charge, new revenue weights need to be calculated.

- Under a revenue yield approach, there needs to be an homogenous common unit of measurement. For UK airports, passengers are used as the unit of comparison. This provides incentives for airports to concentrate on passenger throughput, possibly at the expense of other services.[9]
- The tariff basket approach provides better incentives to move to efficient pricing. Under the revenue yield regime, when there is unused capacity, the airport may set prices below incremental cost for some services and recover these costs on other services.
- Under both regimes, as under price caps generally, quality is an issue, although there appear to be better incentives under the tariff basket approach, as the revenue yield approach is focused on an homogenous unit (for example, passengers). The tariff basket approach has better incentives to provide different levels of service quality as there is an incentive to price different dimensions of quality according to each service's incremental costs and relevant demands (CAA 2001b).

Default price cap

Under a default price cap, an airport would be required to provide a specified level of service at a given price. For any services beyond this standard, each airline would have to negotiate directly with each airport. The extra services could be separate services or services of a higher quality. This process has the potential to encourage commercial negotiation between individual airports and individual airlines, and targets regulation at the core services required by airlines. A default price cap is currently under consideration by the UK regulator, the Civil Aviation Authority (CAA).

However, Australia faces a somewhat different set of circumstances from the United Kingdom, in that domestic terminals in Australia are mainly operated under long-term leases by the major domestic airlines. This precludes some of the potential for discretion in the delivery of airport services by the airport, as the level of the provision of services associated with runways, and aprons, is largely non-

9 For example, if passengers are the base unit, there is little incentive to attract dedicated freight flights, because revenue yield per passenger will increase and possibly exceed the cap, and require an offsetting reduction in aeronautical charges.

discretionary. The use of services, such as aerobridges, and international and domestic common-user terminals, may be somewhat more discretionary, with airlines demanding various levels of service.

It is likely that there would be major disagreements between airports and airlines as to whether a particular level of service corresponded to the level specified under the default cap, or not.

Demand-based variation

At Hamburg Airport, the price cap is designed to share increases in profits due to exceptional passenger growth. Within a dual-till regime, the X factor is adjusted according to a sliding scale based on passenger growth. If this growth exceeds 3 per cent then, for every extra 1 per cent growth, there is an increase in the X factor by one-half of 1 per cent (there is no provision for X to fall if passenger throughput falls short of forecast levels). This sharing of the extra revenue with consumers is based on the premise that the extra profitability of the airport is highly correlated with passenger growth, due to non-aeronautical revenues and/or lower unit costs.

Yardstick regulation/benchmarking

Benchmarking or yardstick regulation attempts to separate the regulated firm's price structure from its own reported costs. This is done through a benchmarking exercise which may use a variety of econometric and mathematical programming techniques.

Benchmarks can be used within a price-cap regulatory regime for various tasks. These include assessing the efficient cost structure of the firm to determine the level of prices and assessing the value of equity in the determination of capital. In setting or resetting the X factor, it is common to benchmark future productivity gains against past productivity gains within an industry. As well, benchmarking is used to assess quality performance and commonly is used within the firm (rather than by the regulator) to assess the firm's performance across a range of activities.

The aim of benchmarking under a price-cap regime is to improve the incentives for a firm by reducing the regulator's reliance on the firm's own costs to set the price-cap parameters. This could provide incentives for cost efficiencies and to invest appropriately.

Problems of benchmarking

There is a range of problems, both theoretical and practical, that hinders the implementation of yardstick regulation. As noted above, in practice, it is very difficult to ignore completely the cost base of the individual firm in setting the price parameters. The costs of setting incorrect prices can be very high. If prices are set too low, then there is the real threat of bankruptcy and, if prices are set too high, the firm will reap windfall profits. As Professor Forsyth stated:

> The alternative to cost-based regulation is yardstick or benchmark regulation. You often find references to this and how it's desirable but regulators always avoid it. They avoid it simply because it's risky from the firm's perspective and therefore from their perspective. Regulators can be punished if an industry is too profitable — and one can quote various examples of that. So the safe thing for a regulator to do is to rely heavily on cost and not too much on benchmarks. So there's a real problem of getting benchmark regulation accepted if that's what's wanted. (trans., pp. 60–1)

The unreliability of benchmarking is due to the difficulty in achieving dependable comparability between firms. The conditions under which firms operate vary and each firm will face different demand structures. Thus each firm may provide a different mix of services and different levels of quality. Yardstick regulation requires that firms are homogenous or that differences are easily identifiable. If this requirement is not met there is a series of subjective judgments to be made by the regulator. Australian Airports (Townsville) did not consider that:

> … it is possible to determine an appropriate benchmark due to wide disparity in demand for, and quality of, services amongst airports. (sub. 14, p. 31)

Application of benchmarking methods, such as data envelopment analysis (DEA), is becoming more sophisticated. However, even if there were an ideal measurement method, it would remain difficult to differentiate between efficiency differences and unexplained cost differences. Thus it is very difficult to ignore the firm's own cost structure in setting prices, a point confirmed in a recent decision in the Victorian Supreme Court in regard to the resetting of price caps in the electricity distribution industry (NERA 2001).

As there is no objective method for choosing the explanatory variables or for allocating unexplained cost differences, the benchmarking process requires arbitrary judgments at crucial points. This leads to an increase in the level of uncertainty and increases the risk to the firm, which in turn may also raise the cost of capital to the firm.

10.2 Future regulation: price caps and Australian airports

Airport participants in this inquiry generally have expressed a preference for limited regulation, although, if explicit regulation were to proceed, then price caps appear to be their preferred approach. For example, Melbourne Airport recommended limited regulation but, if explicit regulation were to proceed, suggested a 'tariff-basket style price cap' (sub. 7, p. 58). However, the first preference of Australian Airports (Townsville) is:[10]

> A broad CPI based price cap set for some airport services prices with scope for pricing reviews for new investment or other special circumstances and no other prices surveillance or monitoring. (sub. 14, p. 3)

The airlines (and their representatives) have proposed a range of regulatory options, though generally supporting stricter price regulation than the airports. Virgin Blue proposed that 'the CPI-X price cap should be applied to all aeronautical services' (sub. 30, p. 25). However, the Board of Airline Representatives of Australia (BARA) recommended that:

> … an effective, simple and relatively efficient approach to regulating the price of airport services is rate of return regulation over each airport as a whole. (sub. 41, p. 53)

In assessing future regulatory options, the Commission is required to take into account the principles referred to in the terms of reference, cited at the beginning of this report and in chapter 4. For example, regulation should promote efficient outcomes and encourage commercially-negotiated outcomes.

In line with the terms of reference, and as discussed in chapter 4, price regulation also should target the aeronautical services and airports where the airport operators have the most potential to abuse market power.

BARA's suggestion for rate-of-return regulation across the whole range of an airport's services is somewhat unusual given the widely-acknowledged problems of rate-of-return regulation discussed above. Moreover, this proposal would regulate returns in areas where airports held little, if any, market power. (This proposal is discussed further in section 10.3 in the context of the single/dual-till issue.)

As discussed above, there are several possible price-cap models as well as a number of issues and options that need to be canvassed. These include the inter-related issues of the starting-price level, the re-setting of X factors and the treatment of new investment. In addition, the coverage of the price cap needs to be examined and

[10] Australian Airports (Townsville) considers that the balance of market power (at least for regional airports), lies with the airlines and considers that regulation is required for this reason.

whether further modifications to the price cap are required to allow for congestion pricing. The efficiency, incentive and compliance effects of each of these options are also discussed.

There seems no reason to prefer the use of a revenue-yield approach rather than the existing tariff-basket approach to a price cap. For the reasons outlined above, the CAA tentatively has concluded that:

> … the tariff basket approach is likely to perform better than the revenue yield approach … (CAA 2001b, p. 6)

It also is clear that yardstick regulation cannot be relied upon to supplant direct analysis of the costs of the firm. This is not to say that benchmarking should not be used to complement price regulation — benchmarking has its place in comparing the performance of airports to both airports within Australia and overseas. As well, the terms of reference for this inquiry state that price regulation should facilitate benchmarking comparisons between airports.

The default price cap raises the issue of the appropriate specification of regulated services. The default price cap has attractive theoretical underpinnings, but its implementation may prove impractical. The users of aeronautical services will have different base requirements, the minimum requirement will differ across airports and disputes are likely as to whether minimum specified standards are being met.

The Commission is interested in participants' comments on the default price-cap option.

Starting prices, X values and treatment of investment

As discussed above, price-cap regulation generally requires regular reference to actual costs of providing the regulated services. If this is not done, prices could move away from efficient levels (either too high or too low) with adverse effects on efficiency.

Therefore a fundamental issue in designing price caps is to attempt to ensure that, at least over time, prices converge to their efficient levels. In particular, to promote dynamic efficiency, price caps must be designed to provide incentives for efficient investment.

In a competitive market, any new investment will be subject to a straightforward cost–benefit analysis to determine whether the investment is viable at expected prices, demand and costs. With regulated firms, the process is reversed. The need

for investment is determined by reference to expected future market conditions and the price that is needed to justify the project is then determined.

While an airport with market power may have some incentives to under- (or possibly over-) invest (chapter 7), price caps introduce a different set of incentives and possible distortions.

As observed by Professor Forsyth:

> Price-caps are a simple form of control, but they open up many subsidiary problems. Further, quite detailed regulation is needed to address quality degradation problems and investment matters. (sub. 5, p. 35)

There are four broad types of investment to be considered:

- cost saving;
- replacement/maintenance;
- capacity enhancing; and
- quality enhancing.

In practice, more than one of these attributes may be associated with a particular investment project.

Cost-saving investments

Cost-saving investment reduces the cost of operating current assets — typically investments that reduce ongoing operating and maintenance costs.

Under price-cap regulation, the airports have an incentive to embrace cost-saving investments because they can retain profits, at least for the term of the regulatory period. Thus, there should be no need for additional incentives for the airports to undertake this type of investment, provided the airport can retain some, if not all, of the savings.

Replacement/maintenance investments

This is investment that is aimed at preserving the current service potential of an asset. It is also the area that has caused considerable contention in current Necessary New Investment (NNI) arrangements (chapter 8). If prices are 'correct', in that they reflect prices adequate for long-term supply of the airport service, then:

> To the extent that this investment represents the most efficient means of maintaining without enhancement existing service potential, it is most appropriate to treat such investments as though they were a form of maintenance expenditure.

> Given the neutral impact on both costs and revenues over time from planned like-for-like cyclic renewal of assets, investments with a maintenance purpose should be included within the price cap. These would provide no basis for modifying the price cap parameters. (NECG quoted in ACCC, sub. 36, p. 101)

In other words, if prices are set at an efficient level, then replacement of existing capital can be expected to proceed, as it would be commercially viable. As stated by Sydney Airports Corporation Limited:

> The reason that an NNI arrangement is required is that existing prices are below incremental cost. If prices approximated incremental cost, new investment could be funded from expected increased revenues from the volume growth, rather than unit price increases. (sub. 27, p. 12)

Capacity-enhancing investments

Capacity-enhancing investment increases the capacity of the airport, typically allowing for traffic growth over time.

Generally, if the increase in capacity increases revenue, the less the requirement for additional incentives under a price cap.

As pointed out by Professor Forsyth:

> When extra capacity enables extra traffic to be handled, revenues will increase. There is no general reason why the price of using the airport should increase as its traffic expands … (sub. 5, p. 26)

and the MTAA Super Fund:

> Moreover, although a price capped firm is unable to raise prices as demand expanded, it would still have an incentive efficiently to invest to expand capacity as long as regulated prices gave a sufficient margin over operating costs. (sub. 22, p. 53)

However, if prices are set below efficient levels and an airport currently is making a loss on the provision of a service, there is no incentive for the airport to increase capacity — it will just lose more.[11]

Quality-enhancing investment

Quality-enhancing investment increases the level of quality for a given service, for example, an upgrade of terminal facilities.

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11 Unless: (a) the airport expects a very large increase in demand such that unit costs fall; (b) costs fall over all output ranges due to technological improvements; or (c) extra capacity encourages additional spending on services outside the price cap.

Under a price cap, an airport is unlikely to be able to capture the extra benefits from a quality-enhancing investment, as it cannot raise prices, unless the quality improvement encourages spending on services outside the cap or increases demand for the airport's services. It is likely that extra incentives, probably an increase in prices, are required to encourage this type of investment by airport operators.

Where the benefits of such investment are likely to accrue to existing airlines, their involvement in the approval process may be appropriate. However, airlines are likely to have divergent quality requirements, and even if existing airlines benefit, if the quality improvement facilitates new entry, existing airlines may oppose it.

As noted above, in practice it may be very difficult to differentiate between types of investment, including capacity- and quality-enhancing investments. Because of the lumpiness of most airport investment, capacity-enhancing investment typically will result in higher quality, at least in the short term. For example, duplicating a runway will (among other outcomes) reduce the time delays for existing flights, which translates into a higher quality service for the passenger.

Implementation of price caps

Apart from cost-saving investment, which the price-capped firm always will have an incentive to undertake (because it can retain the benefits within a period), the incentives to undertake the remaining types of investment depend crucially on the design of the price cap.

The treatment of investment within a price cap is inter-related with the starting prices for the regulated services and how the Xs are set. Thus, for example, if there were no provisions for allowing cost pass-through for any investment, then the starting prices and Xs would have to be set to accommodate all investment.

Figure 10.1 sets out, diagrammatically, three possible approaches to implementing price caps — all of which, in principle, will provide for efficient investments and prices, at least over time. These three approaches are not exhaustive. For example, the situation in which starting prices are above levels required to provide for all investment is not shown. In such a case there would be no need for provisions for the pass-through of investment, while the X values could be made sufficiently large to drive prices to their efficient levels over time.

The three interdependent decision variables listed down the left-hand side of figure 10.1 are:

- starting prices;
- setting X values; and

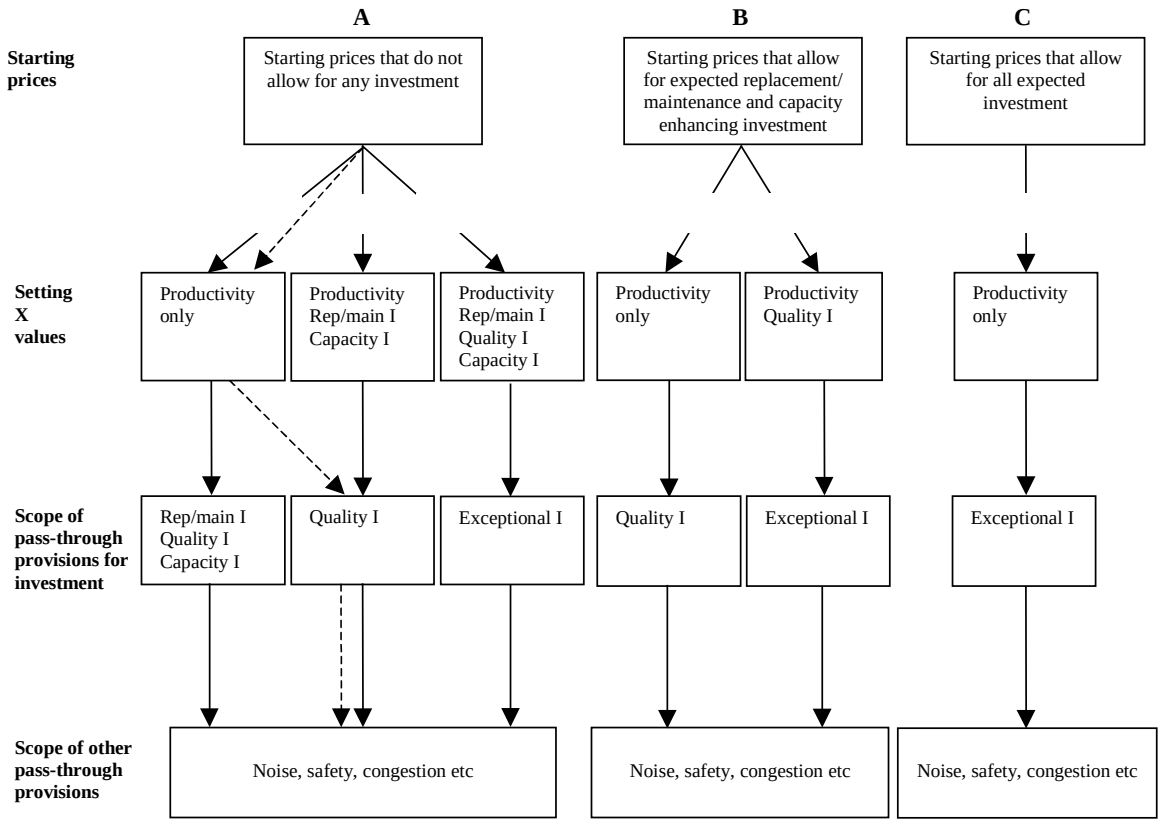
- the scope of investment cost pass-through provisions.

The fourth (bottom) row represents other possible pass-through provisions for costs outside the airport's control, for example noise levies, and mandated safety and security provisions.

Three approaches to price caps are outlined, differentiated by starting prices. Approach A assumes starting prices are not reset and are at a level below that required for any efficient investment (except of course cost-saving investment).

Under approaches B and C, prices are set at a level that is considered adequate for encouraging efficient replacement/maintenance and capacity-enhancing investment over the regulatory period. Approaches B and C differ in the treatment of quality-enhancing investment.

Figure 10.1 **Price-cap approaches**



Rep Replacement. **Main** Maintenance. **I** Investment.

The solid arrows within each of the three approaches represent six feasible paths, given the starting price decision, that could, in principle, deliver efficient pricing and investment outcomes. (The path illustrated by the dashed line is discussed below.)

If starting prices are below the levels required to cover any expected investment, there is likely to be a need to allow price adjustments for capacity-enhancing and replacement/maintenance investment as well for quality-enhancing investment. All paths (1, 2 and 3) in approach A allow for anticipated productivity growth to be incorporated in the X factor. However, the calculation of the X values differs across the three paths with respect to the type of investment incorporated. In path 1, the X values incorporate expected productivity improvements only, whereas path 2 incorporates an allowance for replacement/maintenance and capacity-enhancing investment as well as an allowance for productivity growth. In path 3, the X values incorporate all of the investment and expected productivity gains incorporated in path 2 as well as an allowance for quality-enhancing investment.

The Xs in paths 4, 5 and 6 incorporate an adjustment for anticipated productivity gain, however starting prices are at levels adequate for replacement/maintenance and capacity-enhancing investment. Hence, paths 4, 5 and 6 only differ in their treatment of quality-enhancing investment. In path 4, the X values incorporate expected productivity improvements only. In path 5, quality-enhancing investment is incorporated into the X values, whereas in path 6 it is incorporated into the starting prices.

Given decisions about setting starting prices and Xs, each of the paths requires varying scope for pass-through of investment costs. Path 1 allows for all investment (except cost-saving investment) costs to be to passed through, whereas under paths 2 and 4, only the costs of quality-enhancing investment can be passed through. Under paths 3, 5 and 6 there is no need for ongoing investment assessment (as investment is incorporated in the starting prices), but there is a need to allow pass-through of the costs of investment in exceptional circumstances.[12] This will cover situations unforeseeable at the time the Xs are set. (Where there is provision for assessment of investment on a continuing basis (paths 1, 2 and 4), there is no need for such an 'escape' clause.)

While, in principle, each of approaches A, B and C can provide efficient outcomes, they require different levels of regulatory involvement (at different times), provide a

12 Exceptional circumstances for investment might include situations requiring unexpected investment, or the delay or cancellation of investment that has been allowed for. This could be due to a significant change in demand — such as experienced by Brisbane Airport due to the Asian crisis — or a radical improvement in technology that affects costs significantly.

range of incentives for gaming and commercial negotiation by the parties, have different effects on the time paths of prices, and different effects on investment incentives.

Advantages and disadvantages of different approaches and paths

Approach A has the immediate appeal of administrative simplicity in that there is no need to engage in the lengthy and complicated process of estimating prices (based on an airport-wide cost assessment) that would cover all expected investment (see box 10.2) or, alternatively, to use a benchmark to set prices. Inherited prices can be adapted, though if they were not adequate to cover costs other than investment, they would have to be adjusted. As noted above, price caps were developed in order to divorce regulation of prices from the assessment of costs. However, as also noted above, prices eventually must converge towards efficient levels if efficient long-run provision is to ensue. Thus, if starting prices are below the levels adequate for investment, other mechanisms come into play.

Path 1 is the easiest path to implement at the start of the regulatory period. Prices are carried forward and only the expected productivity improvements need be calculated. However, this simplicity is counteracted by the need for an ongoing examination of every proposed investment (excluding cost-saving investment). This assessment is likely to be complicated by the uncertainty surrounding the existing price levels. To determine the amount of adjustment to the prices for aeronautical services, the appropriateness of each investment will need to be determined as well as a dollar value for all the investments. There then will need to be an assessment of whether current prices will sustain these investments — if not, an upward adjustment of prices will be required.

Certain other aspects of path 1 are appealing. As discussed in chapter 8, the process of cost pass-through can provide an opportunity for consultation between users and the airport, possibly with a view to commercially-negotiated outcomes rather than regulated ones (box 10.4). Also, the need for assessment of investment proposals by the regulator only occurs when the investment proposal is submitted, therefore avoiding the information problems and risks associated with planning investment several years ahead.

Box 10.4 **Project control groups**

User support and the encouragement of commercial negotiation is an important aspect of a regulatory regime. With several large users (the airlines), negotiation with individual airports is feasible. Brisbane Airport has established project control groups (PCG) to assess a range of investment proposals. This process has been established voluntarily by Brisbane Airport and is not mandatory under the existing regulation. However, user support is one of the criteria that the ACCC uses to guide its assessment of investment proposals. This process appears to have been successful. However, with Brisbane's 2000 investment proposal, there was disagreement between the airport and the airlines on whether three proposed projects were appropriately considered necessary new investment.

NECG, as consultants to the ACCC, (sub. 36, attachment D) raised some issues concerning formalisation of this process within a price-cap regime, including the behaviour of the users and the potential for strategic behaviour within the PCG. This behaviour includes:

- cheap riding — where one of the parties to the agreement understates the value (to it) of the project being considered;
- forced riding — larger airlines may force through an investment that causes disproportionate costs on a smaller airline; and
- barriers to airline entry — large incumbent airlines may vote against entry-facilitating investment.

Source: ACCC (sub. 36, attachment D).

A significant disadvantage of adjusting prices as new investment comes on line is that, in practice, it can be administratively complex and costly for all parties involved. Under the current regime (chapter 8) this complexity has been exacerbated by the need to apply for approval of very small investment projects if a price increase is sought. As the ACCC stated:

> So far the Commission has received dozens of applications for new investment proposals, including for small items such as drainage works, baggage room fans, installation of doors to passenger terminals and revegetation works. The process imposes administrative costs on the airport operator, airport users and the regulator and in some cases may delay the investment works. (sub. 36, pp. 105–6)

On this point Qantas Airways agreed with the ACCC:

> … continuous new investment applications to the ACCC are administratively inefficient. (sub. 48, p. 22)

In addition, incumbent airlines may have an incentive to frustrate new entrants by delaying capacity-enhancing investments and could use new investment approval procedures to achieve this.

As stated by Impulse:

> It is our belief that the current regime is not working as appropriate levels of infrastructure development since the entrance of new competitors such as Impulse has not occurred. (sub. 18, p. 3)

Paths 2 and 3 (approach A) again have starting prices too low but require some assessment of investment at the beginning of the regulatory period for incorporation into the X values.

Path 2 will require a relatively high level of regulatory involvement because investment needs must be assessed in setting the X factors as well as on a continuing basis. Also, there will need to be a distinction made between replacement/maintenance, capacity-enhancing investment and quality-enhancing investment. In practice, this could be a very difficult and, at times, arbitrary determination.

Under path 3, all foreseeable investment is included in the X factors. There is no need to differentiate between types of investment. However, the investment requirements for the regulatory period will have to be forecast by the airport (and users) and assessed by the regulator. This will require detailed information on expected future costs and demand growth during the regulatory period. Except for unforeseeable circumstances, new investment will have been set for the regulatory period.

Path 3 shares characteristics with paths 5 and 6 in that all investment must be assessed at the beginning of the regulatory period. Approaches B and C are characterised by the setting of the initial prices at levels adequate for the specified investment. Compared to paths 1, 2 and 4, the ongoing information requirements for paths 3, 5 and 6 are reduced, although there remains the substantial task of determining the initial efficient price levels and Xs for aeronautical services. Major elements of such an exercise are outlined in box 10.2.

Under the system in the United Kingdom, prices are reset every five years based on a review of costs and expected demand. New investment over the regulatory period is estimated and incorporated into the anticipated costs after a consultation process with the industry. This system is similar to paths 3, 5 and 6, as *all* investment is incorporated in the starting prices or the X values at the start of the regulatory period.

The UK experience suggests that, when the investment is planned for five years, the regulator becomes inextricably involved in the investment decision-making process. The further away from the time of actual investment, the more difficult it is to predict accurately the costs and requirements of investment. In addition, airports

have an incentive to overstate investment requirements to procure up-front price increases for their services. Conversely, airlines will have the incentive to understate their forward investment requirements.

A major issue is that, once an investment program is approved, there is an incentive for airport operators to delay the investment process as pricing parameters have been fixed for the regulatory period. Hence, the regulator must ensure the integrity of the investment plan by continuous monitoring during the regulatory period. These tendencies, and other failures of the process, have led the CAA to request feedback from airports and airlines on ways to 'incentivise' investment (CAA 2000e).

The lack of flexibility inherent in this system is important. If Australian core-regulated airports had been restricted to a forward investment plan, then some new investment may have been frustrated (for example, domestic common-user terminals at Melbourne Airport). It is also conceivable that market demand may fall for exogenous reasons — as occurred at Brisbane Airport due to the Asian economic crisis — requiring deferral of investment. Therefore, a process that sets prices that incorporate forward investment needs an escape clause for both the regulator and the airport. However, if this is not carefully framed, one of the major advantages of this system — namely, that it reduces day-to-day regulatory involvement — may be undermined.

Alternative paths?

The ACCC has suggested several price-cap approaches (sub. 36, pp. 102–7). All would carry forward price levels from the current regulatory regime (approach A). However, the proposed approaches are unclear with respect to replacement/maintenance and capacity-enhancing investment.

The ACCC (sub. 36) has suggested an option referred to as a 'hybrid' approach. This would only allow pass-through (upward adjustment of prices within the regulatory period) of the costs of investment for major projects (again keeping starting prices at the current level). All smaller investment projects would be funded through the price-cap parameters. The ACCC recommends that the distinction between small and large investment be based on an (unspecified) dollar value. Although the ACCC recognises that 'the 'X' values should also reflect the approach adopted to new investment' (sub. 36, p. 110), it is not clear whether this means that the X values would be adjusted to accommodate 'small' investments.

Another suggestion for the distinction between investment for the hybrid approach by the ACCC is 'developments that could not be anticipated at the time the 'X'

values were set' (sub. 36, p. 107). This suggestion is somewhat similar to path 6, *if* prices were set at the appropriate level at the start of the regulatory review period. If the prices are not so set, the process would proceed on a similar basis to paths 3 or 5, in that all foreseeable investment would be assessed at the beginning of the regulatory period and prices (including Xs) adjusted to accommodate the expected investment program.

If there is no provision made for replacement/maintenance and/or capacity-enhancing investment in the X values, then efficient pricing may not be achieved. For example, even in principle, the path represented by the dashed line in approach A in figure 10.1 cannot promote an efficient outcome (in the sense of aeronautical revenue covering stand-alone aeronautical costs). With starting prices too low to cover investment and without specific provision for replacement/maintenance and capacity-enhancing investment, airports ability to invest in replacement/maintenance or capacity investment could be impaired (unless the investment were funded from non-aeronautical revenue).

The ACCC's apparent reluctance for starting prices to be reset to levels to cover investment (at least at the beginning of a new regulatory period) appears based on a concern that a rise in prices would deliver windfall gains to airport operators. It explained:

> Introducing new CPI-X price caps for regulated airports raises the question of how to set starting point prices and the 'X' values. The Commission proposes that prices from the current regulatory framework should be carried over to form the starting point for a new price cap. The alternatives, such as setting starting point prices to reflect costs, are likely to result in significant increases or decreases in charges. Given that these starting point prices relate to existing, mostly sunk assets, there is little if any reason to make such a change from an economic efficiency perspective. Instead the main effect of such a change would be a distributional one, either a transfer from airlines and their passengers to airport operators or vice versa. (sub. 36, p. 10)

The scope for windfall gains (or losses) would, however, depend on the expectations of bidders regarding aeronautical price regulation (including NNI pass-through provisions) at the time of bidding. As discussed in chapter 8, it would appear that bidders might have had some grounds for expecting regulated outcomes somewhat different from those that have transpired. Moreover, the price-cap regime was locked in for five years only and described as a transitional regime. Though a price-cap approach that perpetuates existing prices, with appropriate adjustments for investment as the need arises, has some attractive features (including that prices adjust slowly and the scope in providing for consultation between the parties about investment proposals), such a model, for reasons outlined above, may encourage strategic behaviour, particularly by airport users, that frustrates appropriate investment. It also may be administratively costly and protracted. Whichever price-

cap approach is selected, it must be implemented in a way that clearly and transparently sets out how appropriate investment will be accommodated and prices adjusted to levels that will encourage appropriate investment.

Implementation

A price cap could be implemented under the:

- *Prices Surveillance Act 1983* (PS Act);
- *Trade Practices Act 1974* (TP Act); or
- *Airports Act 1996*.

The current price-cap regime is administered under the PS Act (chapter 3). The Productivity Commission, in its draft report, has proposed that the Act be repealed (PC 2001b).

A CPI-X price cap could be administered within either the TP Act via generic provisions (under Part IIIA as an industry code, for example), or within an industry-specific provision. Industry-specific provisions also could be placed in the Airports Act, with the ACCC appointed to administer the cap.

Given that price-cap regulation concerns the competitive conduct of airports, its inclusion within the TP Act rather than the Airports Act would seem desirable. The Commission also inclines to the view that any price-cap regime for airports should be implemented as an industry-specific amendment to the TP Act (as for Telecommunications (PC 2001d)).

Summary

Price caps can be devised that could, in principle and at least over time, deliver efficient prices and investment. The various approaches outlined require different levels of regulatory intervention and provide for different opportunities for commercial negotiation and game-playing by the parties. Major trade-offs relate to whether prices should adjust quickly or slowly to efficient levels, and the level of ongoing assessment of investment proposals.

The scope for game-playing is likely to be reduced if it is made clear to all parties which price-cap approach has been chosen and, therefore, how different types of investment will be accommodated. Nonetheless, the risk of regulatory error remains, as does the almost inevitable convergence of price caps towards cost-based

regulation and the substantial informational requirement and poor incentives for efficiency inherent in that form of regulation.

In particular, because firms always possess more knowledge about the firm and its markets than the regulator (information asymmetry), the firm generally is in the best position to determine future cost structures, demand forecasts and many other important facets of its business. It is difficult for a regulator without this detailed knowledge to determine appropriate prices and investment. The importance of, and inherent problems in, valuing airport land make regulatory determination of efficient airport prices particularly difficult (appendix F).

Given this limited information, pricing rules applied by regulators can have a significant impact on investment in essential infrastructure. The costs of setting prices too low can be severe, in that investment may not be forthcoming at all if it is uneconomic for the firm. On the other hand, if prices are too high, an airport with market power may under- or over-invest. But as discussed in chapter 7, under-investment is less likely to occur if the airport earns substantial non-aeronautical revenue and if price discrimination is feasible. Over-investment is not likely to be a significant issue with privatised airports, though political factors may affect this.

As stated previously, price caps may not be appropriate for capacity-constrained airports, as falling prices give the incorrect signals for investment because the costs used to calculate the pricing parameters are based on the firm's costs, not congestion costs. If prices do not reflect congestion costs the incentive (through the price mechanism) for efficient additional investment is weakened.

DRAFT FINDING 10.1

Incentive regulation has some advantages over cost-based regulation. However, given the tendency of price caps to converge towards cost-based regulation (with associated high levels of regulatory involvement and risks of regulatory error, and the consequences of these for investment and long-term provision of services), price-cap regulation should be implemented only when there is clear evidence that, without such regulation, economic efficiency would be seriously impaired.

In addition, where price caps are implemented, the approach adopted for investment should be spelled out clearly and transparently to all relevant parties in order to reduce the risk of inefficient outcomes and excessive gaming.

10.3 Coverage of price caps and cost-based regulation

A crucial issue in implementing rate-of-return or incentive regulation for airports is determining which services should be regulated. There are three broad options:

- regulate the prices of all services provided by (or at) the airport;
- regulate prices only of those services in which the airport has market power; or
- regulate prices only of aeronautical services in which the airport has market power.

The terms of reference for this inquiry set out several principles to guide future price regulation, including that 'future prices regulation should be applied to those aeronautical services and those airports where airport operators have most potential to abuse market power' (in essence, the last option above). Moreover, core-regulated airports were privatised on the basis that a single till would not be mandated and the Government issued a direction (No. 22) to this effect in relation to Sydney Airport in April 2001.[13]

Nonetheless, several participants have argued in favour of broader application of price regulation on efficiency grounds. These arguments are assessed here and in more detail in appendix C.

Rate-of-return regulation across all airport activities

BARA (sub. 41) argued in favour of imposing rate-of-return regulation across the entire range of services provided by airports (but not for individual services). While arguing against airport-specific price regulation, the MTAA Super Fund (sub. 22) also suggested that, if such price regulation were to be imposed, regulation of prices of all airport outputs would be desirable.[14] Thus, privatised airports would be permitted to earn a normal or 'fair' rate of return across both aeronautical and non-aeronautical activities.

Their rationale for regulating all airport services is that, in order for a decreasing cost, multi-product monopoly to cover its fixed costs, while minimising efficiency losses of pricing above marginal cost, prices should be set such that markets with relatively inelastic demand bear a greater share of fixed and common costs than

13 DoTRD (1996) and Direction No. 22, Minister for Financial Services and Regulation, April 2001.

14 The MTAA Super Fund's reference to outputs might suggest that the regulation should extend to prices of services and goods sold by concessionaires, in which case, their rentals paid to the airport would be measured as costs rather than profits (locational rents accruing to the airport).

markets with more elastic demand (Ramsey pricing). Rate-of-return regulation applied across the entire range of airport services would encourage such pricing. It also has the practical advantage of not requiring cost allocation across various services. While this model, in principle, may be appropriate if firms have market power in all the services they provide, if profits arise from locational rents rather than market power, rate-of-return regulation could have undesirable consequences. As discussed below, if an airport operator were regulated such that additional rents earned could not be retained, the incentive to earn such rents would be removed. This could mean that airport land was not used in the most efficient way. Therefore, rate-of-return regulation may not bring about BARA's apparent objective of reducing aeronautical prices. Rate-of-return regulation also is likely to introduce incentives for the airport to allow costs to increase across the whole range of airport activities (see section 10.1 above).

Single-till price-cap regulation

Single-till price-cap regulation, where a price cap is imposed only on aeronautical activities, but where the setting of the price cap takes into account profits earned in non-aeronautical activities, is a variation on the theme of rate-of-return regulation of all airport services. The major difference is that the single-till price-cap model effectively forces cross-subsidisation of aeronautical activities from any non-aeronautical profits, and provides some incentives for cost minimisation in the provision of non-aeronautical and aeronautical activities, at least during the period of the price cap.

One argument put for a single till is that profits from non-aeronautical activities might reflect market power rather than locational rents. If this were the case, however, it may be more appropriate to reduce prices directly to promote efficient consumption and protection of consumers of the service in question. The single till would not prevent excessive pricing of non-aeronautical services by airports — it merely would require that any monopoly profits were transferred from consumers of these services to airlines and/or their passengers. As Kahn observed:

> It is no more consistent with economic efficiency or fairness if prices for restaurant meals, duty-free sales, car parking or other commercial services at airports are set at excessive levels, than if airlines were subjected to excessive charges for aviation services. Moreover, the inefficiency resulting from the former monopolistic pricing would not be mitigated, but compounded if the excess revenues were used to hold other airport charges below the level of marginal cost. (Kahn 1991, p. 20)

To the extent that a single till discouraged an airport operator from earning any monopoly profits in non-aeronautical activities, this would be a desirable, if possibly unintended, consequence.

BARA, Ansett and Qantas (subs 41, 42, and 48) have argued that efficient airport pricing requires that all locational rents earned at the airport be applied to reduce aeronautical charges. BARA provided some illustrations effecting this result. However, the examples seem to show only that competitive bidding for a scarce 'prize' (in this case, the lease to operate an airport) will deliver the value of the prize to the prize-owner, or to the party designated by the prize-owner. This was the case for the sale of airport leases where the owner, the Commonwealth Government, retained the value of anticipated locational rents that were incorporated in successful bids.

Ansett, in a similar vein, argued that:

> In the world of aviation, airline operators can be considered the anchor tenants of an airport. Hence, the value of an airport is largely driven by airline operations, even when the land is on 'prime' real estate. If the market for airport services was competitive, airlines would not be expected to contribute to 'locational rents'. (sub. 42, p. 22)

What an anchor tenant pays, however, will depend on the relative attractiveness of the location — at very attractive (and profitable) locations, the owner of a shopping complex is likely to have a choice of anchor tenant in which case higher rentals can be charged. In other cases, there will be a 'scarcity' of tenants and they will be rewarded accordingly.

As discussed in chapter 7 and appendix C, airports are likely to 'reward' airlines for additional passenger throughput in recognition of any demand complementarities between aeronautical and non-aeronautical services. The airline, in this case, provides a scarce and profitable resource (passengers) to the airport. But there does not appear to be any reason why airlines (and their passengers) should receive *all* locational rents earned at airports. Importantly, others contribute to the earning of rents (including the airport lessee who develops and allocates appropriate spaces within the airport, thus promoting the creation of such rent, the airport land owner and concessionaires).[15]

Another argument for a single till, addressed above in relation to BARA's proposal for rate-of-return regulation, is that a multi-product monopoly (with a requirement to be (just) self-financing) should be encouraged to set prices in each market to minimise efficiency costs — that is, to implement Ramsey pricing (Crew and Kleindorfer 2001). However, as the ACCC has pointed out (sub. 36), this model assumes that airports have market power across all their activities.

15 The Commission seeks information as to whether domestic airlines that lease and operate domestic terminals and sub-let areas of those terminals to concessionaires, pass any rentals received in excess of costs to airports to reduce airport charges.

Nonetheless, a case for a single till can be made on the grounds that, to the extent non-aeronautical earnings are locational rents, they could be 'taxed' to some extent in a non-distorting manner (that is, without affecting economic behaviour) and used to reduce aeronautical charges to ensure marginal-cost pricing of those services. In other words, locational rents could be used to pay for the airport's aeronautical assets.

As discussed in appendix C, there may be an in principle case for such cross-subsidisation, at least at uncongested airports where the marginal costs of providing aeronautical facilities are likely to fall below average costs *and* where pricing of aeronautical services would otherwise result in some marginal sales being lost.[16] However, the disincentive effects of this on airport development of both aeronautical and non-aeronautical services may cause substantial efficiency losses.[17]

In part this is because an airport operator who knows that any additional locational rents earned will be used to reduce aeronautical charges (by more than the amount an airport operator might reduce such charges voluntarily — see chapter 7 and appendix C) will have a reduced incentive to earn such rents in the first place.[18] This may result in:

- allocation of airport space by the operator to lower-valued uses, in which case some or all rents are forfeited (representing an efficiency loss);
- the 'giving away' of rents to existing concessionaires by way of low rentals (in which case the rents continue to be earned but there is no transfer to aeronautical service users);
- the 'giving away' of rents to concessionaires but where competition for the rents amongst potential concessionaires means that rents are dissipated to some degree in rent-seeking activities; or
- over-capitalisation of, and cost-padding in, non-aeronautical activities by the operator to reduce measured rents (thus also generating an efficiency loss).

Moreover, aeronautical charges could be pushed below their marginal cost. Particularly at capacity-constrained facilities, a single till would push prices away

16 If an airport discriminates in its pricing reasonably efficiently, the marginal distortion will be small. In this case, a single till largely would redistribute income without promoting efficiency.

17 To the extent that an airport can retain additional profits during the price-cap period, there will be some incentive to make short-term investments that result in higher non-aeronautical profits.

18 Though it might be feasible to design an arrangement that would provide incentives for the airport operator to earn additional locational rents (such as an up-front agreement in which an airport operator agrees to pay expected inframarginal rents), single-till arrangements in practice tend to appropriate 'excess' (marginal) rents.

from market-clearing levels and exacerbate excess demand. In this situation, airport profits from non-aeronautical activities would be transferred mainly to airlines (if the latter were allocated slots under a demand management scheme).[19]

In addition, as noted above, owners of leases for core-regulated airports bought the leases on the basis that they could retain profits from services that were not subject to the price cap. The (discounted) expected value of this profit stream largely would have been factored into bid prices, benefiting the Commonwealth Government (and taxpayers). Thus the Commonwealth Government effectively has imposed an up-front 'tax' on expected locational rents.

Price regulation of services where an airport has some market power

A dual-till approach refers to regulation where only those services in which the airport is considered to have market power are subject to a price cap — typically the 'till' includes only those aeronautical services in which the airport has market power.

A dual till may introduce some distortions in favour of non-aeronautical investments, particularly if the price cap, over time, effectively limits the rate of return allowed on aeronautical services. On the other hand, because a dual till allows aeronautical cost recovery, airports may have a greater incentive to invest in aeronautical (as well as non-aeronautical) activities and increased capacity compared with a single till.

A major practical issue in dual-till regulation is the need to distinguish services in which the airport has market power from those in which it has little market power, and then to separate the costs of providing these classes of services. For Australian core-regulated airports, this task largely has been done under current price-cap arrangements, though there is some dispute about airport market power in some aeronautical-related services (for example, refuelling, and taxi and car-parking facilities).

In chapter 6 it was found that major airports are likely to have a high degree of market power in refuelling services. If continued price regulation of airports were considered appropriate, as refuelling is closely related to aircraft movements, its inclusion in a price cap for aeronautical services at those airports with market power would seem appropriate. This might conflict with undertakings given to airports prior to sale.

19 If demand were not rationed, queuing, for example, could dissipate surplus.

Car-parking and taxi facilities are somewhat different. First, because in the Commission's view, airport market power in these facilities is likely to be moderate and, second, because these services are not part of the bundle of core-aeronautical services provided by airports and required by airlines. Thus, even if it were considered that these services should be subject to price regulation, it may be more appropriate to apply it separately to aeronautical services through monitoring or other means.

DRAFT FINDING 10.2

The Commission considers that, if price-cap regulation were considered warranted, the cap should apply only to those aeronautical services in which the airport has significant market power. Profits earned in non-aeronautical activities should not be taken into account in setting this price cap.

If an airport exercises significant market power in any non-aeronautical activity, separate price monitoring or other regulation might be appropriate.

11 Regulatory options: price monitoring, access provisions and general competition law

Price monitoring, access provisions and general competition law are discussed in this chapter as alternatives or supplements to other forms of price regulation.

11.1 Price monitoring

Price monitoring can be described as a lighter-handed alternative to price caps or cost-based regulation. Though firms may be required to provide information on prices, costs and profits, there is no direct regulatory control over prices charged or revenues or profits earned. The impact of monitoring on firms' pricing decisions is through moral suasion, publicity, and the explicit or implicit threat of stricter forms of price regulation. Thus, monitoring can be a less explicit or intrusive method for influencing prices than price caps or cost-based regulation, though it may have similar effects on pricing and costs.

Price monitoring generally has been used in areas where scope for monopoly pricing is limited but there are still some concerns about pricing. As noted in the second reading speech of the Competition Policy Reform Bill, which introduced price-monitoring provisions into the *Price Surveillance Act 1983* (PS Act):

> Price monitoring may be appropriate where there is concern about the effectiveness of competition, a history of price problems or community concern about price levels or movements, or where industries have been recently reformed or deregulated. (HoR, 30 June 1995, p. 2800)

Participants' views

Some inquiry participants advocated price monitoring as an alternative to current arrangements. Although the ACCC (sub. 36) supported continued price caps for aeronautical services at some airports, it suggested their removal at other airports,

and that price monitoring of aeronautical services[1] be implemented as a transitional measure at these airports. This, it claimed, would provide reassurance that the market is functioning properly and allow comparison with airports subject to price caps. The ACCC also suggested that quality of service monitoring should be discontinued at those airports where price caps are removed, that there should be no price notification or monitoring of aeronautical-related services at any airport, and that accounts reporting (under Part 7 of the *Airports Act 1996* (Airports Act)) should continue at core-regulated airports.

The South Australian Government suggested that price monitoring should replace the price cap at Adelaide Airport:

> … aviation support activities (as defined in Declaration 84) and aeronautical charges should be subject to prices monitoring by an appropriate regulatory body. Monitoring should be less costly for all parties, but provide an incentive for airports to be responsible in setting of prices within a transparent framework that clearly allows for tighter control if the Commonwealth Government considered an abuse of market power was occurring. (sub. 33, p. 2)

The Department of Transport and Regional Services supported a model that encouraged commercial negotiation, with monitoring of prices and service quality backed up by scope for regulatory intervention only if any market power is abused:

> The preferred model is to encourage a market outcome with commercially negotiated agreements and any 'umbrella' regulatory arrangement taking more the form of monitoring. Those agreements could include the pricing and coverage of airport services to be charged, the quality of those services and maintenance standards, the conditions of use by airlines of those services, and consultation and arbitration mechanisms …
>
> Under industry specific regulations airports could be required to provide more detailed and transparent cost attribution to be made for 'aeronautical services' as well as other performance indicators such as return on assets by class of asset. The reporting of this information could be underpinned by the *Airports Act 1996* and supported by improved reporting of [quality of service] indicators …
>
> Overlaid to this monitoring role could be either *passive* or *active* regulatory requirements (also given effect to) through amendments to the *Trade Practices Act 1974* …
>
> A *passive* approach would not provide for any intervention except when a price change was demonstrably an 'abuse' of pricing market power with the onus of proof placed on the regulator to demonstrate this against a set of (gazetted or statutory) principles that need not necessarily be airport specific … Statutory remedies for an 'abuse' of power would be desirable and consideration could be given to penalties similar in nature to

1 The ACCC proposed that the range of aeronautical services be extended to include some services previously monitored as aeronautical-related services.

those already provided for under the *Trade Practices Act 1974*. This is the preferred approach for future airport regulation. (sub. 39, pp. 22–4)

Sydney Airports Corporation Limited (SACL), on the other hand, argued that neither price monitoring nor stricter forms of price regulation is warranted:

> … monitoring to date has not disclosed any substantiated concern about airport pricing of the [aeronautical-related] services to which it has applied. Accordingly, SACL sees no need for continued application of prices monitoring of those services …
>
> It might be questioned, if [PS Act] price regulation were no longer to apply to aeronautical charges as urged in this submission, whether price monitoring of those charges should replace it either indefinitely or for a transitional period. The view of SACL is that this would be unnecessary. The residual role of the ACCC under Parts IV and IIIA of the [TP Act] would in our view provide adequate opportunity for scrutiny of such charges. (sub. 27, pp. 48–9)

Although SACL's preferred approach was deregulation[2] of prices, it appeared to prefer a 'light-handed regulatory access and pricing regime' to price monitoring in the event that the Commission considered that some form of price oversight was warranted (sub. 27, p. 40). This proposal essentially relies on amendment of existing access provisions, and is discussed further in chapter 9 (section 9.7).

Some participants were of the view that light-handed forms of price regulation such as monitoring would not constrain the potential for abuse of market power by airport operators effectively — for example, Ansett (sub. 42), the Board of Airline Representatives of Australia (BARA) (sub. 41) and Qantas (sub. 48). This appears to be based on a view that the countervailing power of airlines and the threat of stronger forms of regulation are not adequate to constrain any market power of airport operators, and that requirements for consultation under the New Zealand system of regulation have resulted in significant compliance costs (appendix G).

Current approaches to airport price monitoring

The ACCC currently undertakes formal monitoring of the prices, costs and profits of aeronautical-related services at core-regulated airports under section 27A of the PS Act, and of the quality of selected aeronautical and aeronautical-related services at core-regulated airports under Part 8 of the Airports Act (chapter 3). Operators of core-regulated airports are also required under Part 7 of the Airports Act to provide the ACCC with specified audited financial statements and reports to supplement the information that they are required to produce under corporations law (chapter 3).

2 'Deregulated' airports would continue to be subject to other regulations such as access, anti-competitive conduct, air safety, planning and environmental regulations.

Airports in New Zealand and some airports in the United Kingdom (the revenues for which exceed a specified threshold) also are currently subject to light-handed regulatory regimes that involve price monitoring (box 11.1 and appendix G).

Advantages and disadvantages of different approaches

The extent to which price monitoring will achieve the desired outcomes of regulation — efficient outcomes, minimal compliance costs, promotion of commercial negotiation etc — will depend on the approach adopted, for example:

- whether the threat of stricter forms of price oversight is clearly defined;
- whether stricter forms of price regulation could be implemented;
- whether there is a set monitoring period, and if so, the length of the monitoring period;
- whether information is disclosed on a voluntary or mandatory basis;
- the nature of the information to be disclosed and the frequency of disclosure; and
- whether the information requirements can be altered.

Price monitoring has potential to encourage commercial negotiation between airport operators and users and reduce 'gaming' of the regulatory system by the parties, provided there is no immediate and automatic recourse to regulatory determination of prices. Price monitoring also typically requires less regulatory intervention and imposes lower compliance costs. On the other hand, the potential for abuse of market power may be greater under a price-monitoring regime than under price caps or cost-based regulation, though such potential may be limited by a well-defined and credible threat that government could reintroduce price caps (or other forms of price regulation) at airports where market power clearly was being abused.

However, an unspecified threat of stricter price regulation could lead to regulatory uncertainty. Professor Forsyth noted, in the context of regulation of airports in New Zealand, that this could result in inefficiencies similar to those that occur when stricter forms of price regulation apply:

> The threat to regulate is not the same as actual regulation, but its impacts on the firm may well be much the same. The regulated firm does not know what behaviour on its part will induce the regulator to impose formal regulation. One possible trigger might be its profitability; if the firm earns high or supernormal profits, the regulator may intervene. If this is what the airports believe, this shadow regulation would have the same effects as cost plus regulation. The incentive to keep costs at a minimum would be weak, since lower costs and higher profits will result in regulation being imposed. The inefficiencies created by cost-plus regulation will also be present with this shadow regulation. (sub. 5, p. 19)

Box 11.1 Light-handed regulation of airports in New Zealand and the United Kingdom

New Zealand

The New Zealand approach to economic regulation of airports focuses on:

- the disclosure of prices, terms and conditions for contractual arrangements, costs, performance measures, and financial performance indicators;
- the use of the Commerce Act 1986 to control anti-competitive behaviour; and
- threats of further regulation, such as price control, if market dominance is abused.

The regulatory regime aims to encourage negotiated outcomes between parties, without the need for direct intervention by the Government.

Importantly, airport companies are required to consult with airlines over charges and disclose prices, terms and conditions for contractual arrangements, costs, performance measures, and financial performance indicators. Where proper consultation processes are not carried out, airport users can initiate legal proceedings — this has been a major feature of the New Zealand experience.

Airport companies are subject to general competition law provisions (Commerce Act 1986). Part IV enables the Governor-General, on the recommendation of the Minister of Commerce, to impose price control in circumstances of restricted competition.

United Kingdom

A system of light-handed economic regulation applies to UK airports other than designated airports that achieve a pre-determined revenue threshold. A key component of this regime is public disclosure of airport charges and accounts. Airports subject to light-handed regulation must routinely provide the Civil Aviation Authority (CAA) with their annual statutory accounts and schedules of airport charges. Airports do not need to seek CAA approval before they revise their airport charges but must notify the CAA of the charges before they take effect.

Although airports subject to light-handed regulation are not subject to price caps, the option of imposing further restrictions is available to the regulator if the airport is deemed to have abused its market power. On receipt of a complaint, the CAA may investigate and recommend actions or impose conditions on the airport if necessary. Additional restrictions can be applied in cases where it is determined an airport has: unreasonably discriminated against any class of users (or particular user) of the airport; unfairly exploited its bargaining position relative to users generally; or levied charges that are unduly low and cause (or are designed to cause) damage to another airport.

Airports subject to light-handed regulation can also be designated by the Minister of State under section 40 of the UK Airports Act and, consequentially, be subject to price-cap regulation.

Sources: CAA (2000b); CC (2001a); PSA (1995); Appendix G.

The potential for these inefficiencies may be alleviated to some extent by clearly defining the behaviour on the part of the regulated firm that would trigger introduction of stricter forms of price regulation (or, indeed, 'good' behaviour that would *not* trigger stricter regulation). Nonetheless, defining such behaviour may be difficult — high prices may be a signal that new investment is required rather than an indication that monopoly prices are being charged, high profits might reflect entrepreneurial skills rather than market power, and increases in prices may simply reflect changes in costs or that prices previously were too low. In a congested airport, they may be a means to allocate the available capacity efficiently. This suggests that a broad set of principles might be preferable for guiding good behaviour rather than specific criteria that, applied in isolation, may not be consistent with efficient outcomes.

Specific criteria could encourage strategic behaviour if some parties considered that such behaviour would lead to introduction of stronger regulation. Though there is a need for a credible threat of stronger regulation for reasons discussed above, if it were made clear that stricter forms of price regulation would not be reintroduced within a predetermined period, bona fide commercial negotiations might be encouraged. A review at the end of that period would assess whether stricter forms of price regulation, further monitoring, or other action were warranted at individual airports. The length of this monitoring period would be critical. It would need to be long enough to encourage commercial negotiation, but not so long that the threat of possible reintroduction of stricter forms of price regulation at the completion of the period was not an effective deterrent against abuse of market power.

This review at the conclusion of the monitoring period could be undertaken by a regulator or by an independent body, and take into account changes in the competitive environment in which an airport operates and the behaviour of the various parties during the monitoring period. Information collected through monitoring could form part of that assessment. While the regulator is likely to have expertise in analysing monitoring information, as a matter of principle it would be desirable to separate policy and regulatory roles by having the review conducted by an independent review body, as noted by the Commission in the draft report of its review of the PS Act (PC 2001c).

The success of a monitoring regime would also depend on whether disclosure of information was mandatory or voluntary. Although the compliance costs of voluntary disclosure may be lower, a legislative requirement for disclosure could help ensure compliance and allow monitoring of information that is not publicly available. Penalties for non-compliance may also encourage monitored firms to comply with disclosure requirements.

Comprehensive requirements for disclosure that are spelt out clearly at the start of the monitoring period, and not altered, may help to minimise disputes, gaming and regulatory (in this case, monitoring) creep. Although there may be occasions when it is desirable to vary disclosure requirements or seek further information, doing so may increase compliance costs and regulatory uncertainty. Additional information could be sought and provided on a voluntary basis, although there would be no guarantee that the monitored firm would provide the requested information.

Information that could be disclosed under a price-monitoring regime includes charges for aeronautical and aeronautical-related services, revenues, the level and incidence of operating and capital costs, various measures of profitability, service quality and productivity. Data for non-aeronautical activities might also be appropriate, for example, in relation to cost and revenue allocation. The disclosure of such information may:

- help in assessing whether any market power is being abused;
- facilitate comparisons of monitored variables between airports (both within Australia and between Australian and overseas airports); and
- allow airport users to negotiate better with airport operators.

The information that airport operators in New Zealand are required to disclose is detailed in box 11.2.

Box 11.2 Information disclosure requirements in New Zealand

The Airport Authorities (Airport Companies Information Disclosure) Regulations 1999, which apply to financial statements prepared on or after 1 January 2000, require specified airport companies to disclose information, which can be summarised as:

- segmented financial accounts for identified airport activities;
- passenger charges and charges for identified airport activities, and the methodology used to determine these charges;
- the basis for allocating assets to identified airport activities;
- details of asset revaluations and any reports on which revaluations were based;
- operating costs of identified airport activities;
- weighted average cost of capital (WACC) and the methodology and calculations used to determine WACC;
- numbers of passenger and aircraft movements;
- interruptions to services; and
- the number of people employed in identified airport activities.

Source: CC (2001a).

On the other hand, disclosure of information may have unintended consequences, such as restricting scope for airport operators to offer incentives to new airport users or volume discounts to large users without harming airport operators' relations with competing users. If the information that is required to be disclosed is very detailed and comprehensive, the compliance costs of monitoring could also be significant. Indeed, monitoring could be implemented in a manner that results in information requirements as great as those for price caps or cost-based regulation. BARA (sub. 41) stated that the compliance costs of monitoring are not necessarily lower than the compliance costs associated with the current regulatory arrangements. SACL (sub. 27) also noted that price monitoring incurs compliance costs.

To the extent that the information required for monitoring is less detailed and its analysis by the regulator less complex than for price caps, the compliance costs of regulation may be reduced. Airport operators already may be required to collect and disclose some of the required information under other legislative provisions such as corporations law, although perhaps in less detail. Indeed, even in the absence of price monitoring, airport operators may collect at least some of the required information for their own purposes, and may make it publicly available of their own accord, as has been suggested by Melbourne Airport (PC 2001b). It was noted in chapter 9 that, though airport operators have incurred costs complying with current monitoring arrangements, costs have not been particularly large because the information requirements have not been substantial.

Monitoring only those airports and services where there is considered to be scope for abuse of market power could help to minimise the compliance costs of monitoring. A model ensuring that information is not required too frequently could also help to reduce compliance costs. This needs to be balanced against the need for regulators and others to gain an accurate picture of changes in monitored variables over time.

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Price monitoring has potential to reduce compliance costs, promote commercial negotiation and reduce incentives for gaming of the regulatory system. If there is no scope for day-to-day regulatory intervention in firms' pricing, the risk of regulatory failure may be reduced and efficient outcomes promoted. But if it is highly intrusive it could have high compliance costs and reduce efficiency. To provide an effective restraint on the exercise of market power, price monitoring must be supported by a well-defined and credible threat that stricter forms of price regulation could be introduced.

Implementation of price monitoring

Price monitoring could be implemented under a number of legislative instruments, including the PS Act, *Trade Practices Act 1974* (TP Act) or industry-specific legislation.

As noted above, price monitoring of aeronautical-related services at core-regulated airports currently is conducted under section 27A of the PS Act. Monitoring of aeronautical services could also be undertaken under these provisions. However, in the draft report of its review of the PS Act, the Commission concluded that 'the PS Act is an unsatisfactory vehicle for conducting inquiries and monitoring' (PC 2001c, p. 77). It proposed that the PS Act be repealed, and that either existing alternatives be relied upon for price monitoring, or a new section incorporated in the TP Act to provide for monitoring and inquiries (see below).

The TP Act contains a number of existing provisions under which price monitoring could be conducted:

- section 28 provides for the functions of the ACCC in relation to dissemination of information, law reform and research;
- section 29 requires the ACCC to comply with directions of the Minister and requirements of Parliament;
- Part IVB provides for voluntary or mandatory codes to be declared by the ACCC; and
- section 29B details the functions and powers of the National Competition Council (NCC) (PC 2001c).

While these provisions do not provide specifically for price monitoring, they permit the Minister to direct the ACCC or NCC to undertake research and analysis, and could allow the Minister to direct either organisation to conduct price monitoring. However, as noted in the review of the PS Act, these provisions lack a clear framework for defining the objectives of monitoring and ensuring its appropriate application.

The TP Act could also be amended to provide for price monitoring. This could be done through either generic provisions as proposed in the draft report of the review of the PS Act or industry-specific provisions.

The Commission's proposal to repeal the PS Act and incorporate a new section in the TP Act providing powers to undertake public inquiries and to implement monitoring programs can be summarised as follows:

- firms may only be subject to monitoring following a recommendation from a public inquiry;
- a public inquiry could only be initiated where the market is of national significance and there is evidence of monopolistic pricing;
- the inquiry would be conducted by a body other than the regulator;
- the information to be disclosed would be determined during the inquiry process;
- the ACCC would be responsible for collating and auditing monitoring information and its public dissemination, but could not make any determination on the appropriateness of prices or make recommendations to government under this monitoring provision; and
- monitoring would be for a limited period, and the monitoring declaration automatically revoked at the end of that period (PC 2001c).

Industry-specific amendments to the TP Act could be made to provide for price monitoring of airport services. The Postal Services Amendment Bill 2000 tabled in Commonwealth Parliament proposed, among other things, to amend the TP Act by introducing industry-specific provisions (section XID) to regulate the prices charged by private firms for standard letter services. While the Bill was not enacted, it would have been the amended TP Act, rather than the PS Act, that provided for price regulation of postal services.

Alternatively, industry-specific price-monitoring provisions could be incorporated into the Airports Act.

The Commission is of the view that any criteria for monitoring incorporated into industry-specific legislation should reflect generic monitoring criteria.

Another issue relevant to the implementation of a price-monitoring regime is by whom it would be administered. A number of organisations have expertise in monitoring prices, for example:

- the ACCC conducts price monitoring in a number of sectors under various legislative instruments;
- the Bureau of Transport Economics (BTE) monitors prices, costs and other variables in a range of transport-related industries; and

- the Productivity Commission monitors the performance of government trading enterprises and conducts national and international benchmarking of the performance of key Australian industries.

As noted above, in the draft report of its review of the PS Act, the Commission proposed that the ACCC be responsible for collating and auditing information and ensuring compliance under its proposal to repeal the PS Act and insert a new section in the TP Act. This would ensure the ACCC's expertise in monitoring prices is applied in the new regime (PC 2001c). However, Melbourne Airport, although not opposed to the ACCC taking such a role, suggested that other agencies such as the BTE may also be able to fulfil that role, particularly if the aim of monitoring is to inform policy makers rather than to intervene in pricing decisions (PC 2001b).

11.2 Access provisions and general competition law

Airport operators currently are subject to the access provisions of section 192 of the Airports Act (which applies to privatised core-regulated airports only) and Part IIIA of the TP Act. Any anti-competitive practices of airports would be subject to Part IV of the TP Act (chapter 3). These provisions could continue to complement any future price regulation of airport services, providing the potential for arbitration of terms and conditions of access where disputes arose. Indeed, access regulation could provide an alternative to an industry-specific price regulation regime. Prices could be regulated through regulation of the terms and conditions of access to airport services under Part IIIA or an airports-specific access regime, if problems of access arose.

There has been limited application of access provisions and general competition law to airports to date (chapter 9). However, reliance on these provisions as an alternative to direct regulation of prices may result in greater use of these provisions by airport users in an attempt to achieve indirect regulation of prices.

In this section, the advantages and disadvantages of various approaches to regulation of access and anti-competitive conduct are outlined. Particular attention is given to the question of whether continuation of an airports-specific access regime is warranted.

Participants' views

Though the specific details of their proposals varied, several participants proposed arrangements that involved removal of stricter forms of price regulation and

reliance on access provisions and general competition law and the threat of re-regulation to constrain potential abuse of market power.

The Australian Airports Association argued that:

> Due to the significant countervailing power of airlines, and the active competition between airports for a range of important services, a strong argument can be made that both the Prices Surveillance Act … and the automatic declaration of airport services for the purposes of Part IIIA of the Trade Practices Act 1974 under section 192 of the Airport Act 1996 should be removed. This would leave airports subject to declaration under Part IIIA on a case by case basis in the same way as any other infrastructure is liable to Part IIIA, and subject to the usual application of Part IV of the [TP Act]. (sub. 15, p. 5)

SACL supported a model under which section 192 of the Airports Act is repealed or amended so that airport services are not automatically declared, and airports are made exempt from Part IIIA. It argued:

> … the case for the complete economic deregulation of Australian airports is compelling. Airports have a limited degree of market power which is mitigated substantially by the countervailing power of airline customers and strong incentives to develop commercial relationships to deliver growth.
>
> The potential cost of imperfect regulation is extremely high given the importance of efficient investment in new capacity and services.
>
> In the event total deregulation results in unexpected difficulties, the Government always retains the ability to reintroduce regulation. (sub. 27, p. viii)

Adelaide Airport Limited argued that it is not in a position to abuse market power and that:

> … it is inappropriate to continue specific regulatory oversight and impose additional costs on AAL when the general provisions of the [TP Act] provide ample scope for checking market power. (sub. 20, p. 16)

Some participants supported a model under which existing price regulation would be removed and airport operators would develop commercial agreements or 'undertakings' setting out the terms and conditions under which airport services would be provided — for example, Melbourne Airport (sub. 7) and Westralia Airports Corporation (sub. 21). This approach is discussed in more detail later in this chapter.

Other participants argued that reliance on access provisions and general competition law is not an appropriate model for regulating prices of airport services. For example, Virgin Blue stated:

> The arbitration framework in Part IIIA should be no more than a residual regulatory regime, and is not a substitute for overall price regulation. To rely on the arbitration

> provisions in Part IIIA alone, would result in a substantial increase in regulatory costs, due to the expense of the process, delay and uncertainty. It is also likely to significantly increase the prospect for disputation. Arbitration is an ad hoc, cost-based, solution to a particular dispute and provides a poor framework for general price regulation of a natural monopoly facility. An appropriately framed CPI-X cap would provide greater incentives to efficient airport operation, efficient pricing and efficient resolution of pricing disputes. (sub. 30, pp. 23–4)

Qantas (trans., p. 274 and sub. 48) was of the view that Part IV is not an effective mechanism for preventing monopoly pricing, and that achieving desired pricing outcomes under the negotiate–arbitrate framework embodied in Part IIIA is likely to be very complex and difficult. Hence, Qantas recommended continuation of an airports-specific access regime:

> In Qantas' view, it is both unnecessary and administratively inefficient to demonstrate the applicability of the declaration criteria each time an access application is made in respect of an airport. It is for that reason that the Federal Government enacted section 192 of the *Airports Act*. As the Productivity Commission is aware, section 192 deems each airport service to be a declared service for the purposes of Part IIIA. Section 192 does not completely remove inefficiency from the administrative process, but it does improve it greatly. (sub. 48, p. 27)

The ACCC (sub. 38) considered that reliance on Part IIIA for regulating prices has a number of limitations, including uncertainty about pricing outcomes, that the process is time consuming and costly, and that there is likely to be a high propensity to seek arbitration rather than negotiate outcomes.

Assessment of different approaches to regulation of access and anti-competitive conduct

Reliance on access provisions and general competition law and the implicit or explicit threat of re-regulation to constrain potential abuse of market power would allow airport operators to set prices without regulatory intervention or oversight *provided* they did not breach the provisions of Part IV and were not subject to arbitration under Part IIIA.

Part IV

Though Part IV of the TP Act proscribes certain practices that can create market power through restricting competition or through mergers, and makes illegal the use of market power to harm or eliminate competitors where market power is already established, Part IV relies on *ex post* remedies for abuse of market power, and monopoly pricing per se is not proscribed. Although section 46 can address pricing

issues such as price fixing or predatory pricing, it does not directly address situations where market power results in monopoly prices. There would be no contravention of section 46 unless a pricing decision is for one of the proscribed purposes. The legal costs associated with prosecution for contravention of the provisions of Part IV may also be significant, and it may be difficult to prove an offence has occurred.

Though it would be possible to amend Part IV to address pricing issues relating to airports, amending generic provisions for an industry-specific purpose is unlikely to be an appropriate approach due to its effects on other sectors of the economy. Consideration of changes to Part IV is outside the terms of reference of this inquiry. Thus, the discussion below is focused on access regulation. Part IV would continue to apply regardless of other legislative arrangements.[3]

An airports-specific access regime?

As it stands, section 192 of the Airports Act effectively lapses once initial access declarations expire. (As noted in chapter 3, the Minister is required to specify the expiry date of the determination, and no power is conferred on the Minister under section 192 to renew the declaration once it has expired (ACCC, pers. comm., 5 July 2001).) These declarations expire on 30 June 2002 for Phase 1 airports and on 30 June 2003 for Phase 2 airports.

Though section 192 could be amended to continue to operate in its current form, at issue is whether there is a case for continuation of an airports-specific access regime and, if so, what form that regime should take.

As discussed in chapter 9, the stated rationale for section 192 was the Government's desire to encourage access to airports by new airline entrants. However, for reasons discussed in chapter 9, section 192 does not appear to have been instrumental in achieving this outcome. Importantly, two airports built new terminal facilities for these entrants, making gate allocation at existing domestic terminals unnecessary. Nonetheless, this is not to say that access issues with respect to new entrants will not arise in future. However, as discussed in chapter 7, airports do not seem to have strong reasons to deny or frustrate airline access to the airport.

That section 192 has not been invoked extensively does not mean necessarily that is has not influenced airport behaviour. As discussed in chapters 6 and 7, airports may have some incentive to frustrate access to the airport where, by doing so,

3 Part VII of the TP Act confers on the ACCC power to authorise practices otherwise proscribed under Part IV.

competition in a particular market (such as car parking) can be constrained and above-normal profits earned by the airport.

Another possible rationale for airports-specific access arrangements is the range of airport services and number of potential access seekers. This could warrant more streamlined access provisions than provided in Part IIIA. The ACCC argued that:

> The difficulties experienced with the existing declaration mechanisms under the Part IIIA suggest that a declaration procedure whereby access seekers must first seek declaration of services before being entitled to access imposes a significant barrier to entry. This would seem to be unnecessary in the context of an industry where there is clearly a need for an effective access regime and a great deal is known about the nature of services provided at airports. (sub. 38, p. 12)

Qantas made a similar argument:

> While the application of the declaration criteria is relatively straightforward to a large range of airport services, the procedural requirements under Part IIIA to demonstrate the criteria in each access application is burdensome and time consuming … (sub. 48, p. 27)

Though Qantas stated it has 'experienced substantial difficulty in negotiating access to a range of services at airports', it has not sought declaration of any airport services at any airport under either section 192 or Part IIIA (sub. 48, p. 24).

The only application of Part IIIA to airports to date has been the Australian Cargo Terminal Operators (ACTO) declarations at Sydney and Melbourne International Airports (chapter 9). Indeed, these are the only declarations in any industry to date under Part IIIA. As noted in chapter 9, there were significant delays involved in these declarations and subsequent appeals, and the administrative and legal costs are likely to have been significant. However, in so far as precedents have been determined, these costs should not all be attributed to this specific case. It is also likely that clarification of the Part IIIA declaration criteria through the Australian Competition Tribunal review of the ACTO declarations at Sydney International Airport would result in fewer delays in future declaration decisions.

In broad terms, an airports-specific access regime may be warranted where there is a justification either for weaker declaration criteria and/or different access processes and procedures.

Currently, airports are declared automatically under section 192, though access seekers must apply to have an airport service declared in order for arbitration of terms and conditions for that service to occur. Box 11.3 sets out the declaration criteria under section 192 and Part IIIA respectively.

The Part IIIA declaration criteria are designed to ensure the access framework is applied only where access would promote competition in a related market, it is uneconomic to develop another facility to provide the service, and the facility is of national significance. The criteria for declaration as an airport service under section 192 generally are weaker than the Part IIIA criteria.[4] There is no requirement under section 192 that access to a service promote competition in another market, and the facility need not be of national significance. As some inquiry participants noted (for example, Hastings Funds Management (sub. 19) and SACL (sub. 27)), this could result in broader coverage of services under section 192 than would occur under Part IIIA.

The ACCC suggested that the requirement under section 192 that 'facilities cannot be economically duplicated' should be amended to reflect the (less stringent) Part IIIA requirement that 'it would be uneconomical for anyone to develop another facility to provide the service' (sub. 38). It also advocated 'specification of certain up-front declared services, coupled with a mechanism for declaration of other services (or variation of the initial list) in the future' (ACCC, sub. 38, p. 15).

Qantas (sub. 48) advocated that section 192 declaration criteria should be amended so that a service should only be required to be *used* for the purposes of operating and/or maintaining civil aviation services at the airport, rather than be *necessary* for the purposes of operating and/or maintaining civil aviation services. It also considered that section 192 should apply to all core-regulated airports (Sydney Airport in particular), rather than just to privatised core-regulated airports, and that provision should be made for airport operators to lodge access undertakings following declaration under section 192.

In its review of the national access regime, the Commission (in its position paper) considered:

> The current approach of a national access regime operating in tandem with, and providing guidance for, industry-specific regimes has significant advantages … Some changes to Part IIIA are nonetheless required to strengthen its framework role and encourage convergence in the industry-specific regimes. Moreover, underlying the various arrangements should be the general principle that Part IIIA and industry regimes diverge only where specific circumstances make this absolutely necessary. (PC 2001a, p. 93)

4 A possible exception is that criterion (b) under Part IIIA, which requires that it be uneconomical for anyone to develop another facility to provide the service, is potentially a weaker test than the section 192 test that the facility providing the service cannot be economically duplicated (PC 1998).

Box 11.3 **Declaration criteria**

Section 192

Section 192(5) of the Airports Act states that an *airport service* means a service provided at a core-regulated airport, where the service:

(a) is necessary for the purposes of operating and/or maintaining civil aviation services at the airport; and

(b) is provided by means of significant facilities at the airport, being facilities that cannot be economically duplicated;

and includes the use of those facilities for those purposes.

Part IIIA

Section 44G(2) of the Trade Practices Act states:

The [National Competition] Council cannot recommend that a service be declared unless it is satisfied of all of the following matters:

(a) that access (or increased access) to the service would promote competition in at least one market (whether or not in Australia), other than the market for the service;

(b) that it would be uneconomical for anyone to develop another facility to provide the service;

(c) that the facility is of national significance, having regard to:

  (i) the size of the facility; or

  (ii) the importance of the facility to constitutional trade or commerce; or

  (iii) the importance of the facility to the national economy;

(d) that access to the service can be provided without undue risk to human health or safety;

(e) that access to the service is not already the subject of an effective access regime;

(f) that access (or increased access) to the service would not be contrary to the public interest.

Sources: Airports Act 1996; *Trade Practices Act 1974*.

The position paper also suggested several amendments to Part IIIA to strengthen declaration criteria such that facilities and services would be declared only where there would be a greater likelihood of efficiency benefits.

In contrast, the ACCC's proposal for up-front declaration of certain airport services would seem to by-pass the need for assessment of likely efficiency outcomes of declaration altogether, while the Qantas proposal would weaken further section 192 criteria relative to current Part IIIA declaration criteria. Given that an airport's incentives to deny access are limited (chapter 7), the case for considerably weaker

declaration criteria than those applied to other industries does not seem to be strong. Despite its proposal for listing declared airport services, the ACCC also observed:

> When a service provider is vertically separated it will usually have little incentive to deny access. While the service provider may exploit its market power by setting high prices it is unlikely to manipulate other terms and conditions to limit access. Nevertheless the negotiate-arbitrate provisions allow an access seeker to seek arbitration over non-price terms and conditions. This could result in unnecessarily intrusive arbitration over detailed operational matters. (sub. 36, p. 94)

This suggests that application of the negotiate–arbitrate access model should be confined to those situations where airports clearly have an incentive to deny access and where declaration of the service would promote efficiency benefits. In the Commission's view, application of Part IIIA criteria to airports would promote this outcome. Changes proposed to the Part IIIA declaration criteria in the Commission's position paper on the national access regime (PC 2001a, discussed below) would not affect this conclusion.

To some extent the ACCC's proposal is designed to address procedural problems created by the large number of services provided by airports and multiple users of airport services. Qantas also was of the view that a negotiate–arbitrate model was not suited to industries such as airports where there are many users and multiple transactions (trans., p. 275).

However, this could be addressed within Part IIIA by allowing 'multilateral' arbitration of terms and conditions of access to a declared service. If such a change were not implemented within the national access regime, an industry-specific regime that allowed for multilateral arbitrations might be warranted.

DRAFT FINDING 11.2

There do not appear to be any grounds for airports-specific access arrangements that set lower declaration thresholds than Part IIIA. An industry-specific regime that allowed for multilateral arbitrations might be warranted if such arbitrations were not provided for in the national access regime.

Whether or not an airports-specific access regime were retained, airports would continue to be subject to Part IIIA unless they were specifically exempted from it. In the absence of airport-specific price regulation, Part IIIA could complement price regulation or provide price (and other) regulation of airport services where access was sought and facilities declared.

SACL stated that 'the very great risk with Part IIIA is that it becomes *de facto* price control because every transaction gets pushed into arbitration' (trans., p. 91), and that airports should not be subject to industry-specific access provisions or Part IIIA

(sub. 27). If airports were not subject to access or price regulation, Part IV would be relied upon to constrain potential misuse of market power. However, as noted above, Part IV relies on *ex post* remedies for abuse of market power, and does not address monopoly pricing per se.

Other participants expressed concern about the suitability of the negotiate–arbitrate model embodied in Part IIIA for regulating airport prices, for example, the ACCC whose comments are quoted above.

Melbourne Airport stated:

> Part IIIA is predicated on there being a single access provider in dispute with a single customer. It seems to us that if Part IIIA were to be relied upon, airports could face the possibility of being constantly in arbitration with airlines and the ACCC. (sub. 7, p. 56)

On the other hand, access regulation could have some advantages compared with price regulation. It is activated only when a user complains and provides some encouragement of commercial negotiation and agreements (PC 2001a). Though compliance costs can be high, once precedents are set, the need for arbitration may decrease.

Nonetheless, application of Part IIIA to airports to date has raised a number of concerns including the degree to which the declaration criteria are open to interpretation, that the national significance test is linked to the facility rather than the service provided by the facility, and that there is considerable scope for delays in the declaration process (see chapter 9 and PC (2001a) for a more detailed discussion).

In the position paper for its review of the national access regime, the Commission proposed a number of amendments to the current Part IIIA regime to address these and other concerns (PC 2001a).[5] Those relevant to airports include:

- modification of the declaration criteria;
- inclusion of pricing principles to improve certainty for access seekers and providers;
- provision to lodge undertakings after a service has been declared;
- appeal rights for decisions on undertaking applications; and
- exemption from Parts IV and VII of the TP Act of the terms and conditions of: arbitrated determinations for declared services; agreements reached under

5 The Commission proposed changes to the current Part IIIA regime in two tiers. The Commission considered the tier 1 proposals have clear benefits, while the significance of the benefits of the tier 2 proposals is unclear. The discussion here focuses on the Commission's tier 1 proposals.

certified regimes or negotiated under accepted undertakings; and private agreements for declared services covered by registered private contracts.

If the Commission's proposals were implemented, several concerns in relation to the application of the current Part IIIA regime to airports would be addressed.

Promotion of commercial agreements and undertakings

As noted above, some participants supported a model under which existing price regulation would be removed and provision made for airport operators to develop commercial agreements or 'undertakings' setting out the terms and conditions under which airport services would be provided. Development of commercial agreements within a regulatory framework is an intermediate approach to regulation of airport prices.

Part IIIA undertakings

Part IIIA currently provides for airport operators to lodge access undertakings with the ACCC. Airport services at privatised core-regulated airports were declared automatically for the purposes of Part IIIA under section 192, and currently there is no provision for undertakings covering declared services to be lodged (chapter 3). However, declarations under section 192 will expire on 1 July 2002 and 1 July 2003 for Phase 1 and 2 airports respectively, following which airport operators will be able to submit undertakings under Part IIIA.

As discussed in chapter 9, two airports submitted draft undertakings that were not acceptable to the ACCC. Their apparent reluctance to pursue undertakings further may have been due to a perception on the part of airport operators that lodgement of an undertaking acceptable to the ACCC was less appealing than the risk of declaration and subsequent arbitration. If airport operators considered that there was a greater likelihood of application of access regulation in the absence of direct price regulation, they may be more likely to submit undertakings. Further, changes to Part IIIA proposed in the access inquiry, such as provision for appeal of decisions not to accept undertakings, may increase the likelihood that undertakings will be lodged successfully. The proposal to allow lodgement of undertakings after a service has been declared may also provide some encouragement.

Qantas (trans., pp. 275–6) suggested that an access model based on an industry code such as the National Electricity Code (NEC) (box 11.4) may be a desirable approach to regulating prices for airport services.

In particular, Qantas argued for regulation of minimum service levels:

> Qantas believes that the most effective and practical means to ensure minimum levels of service quality within the airport industry is to include within the regulatory framework service level commitments. These are included in other regulated industries such as electricity. (sub. 48, p. 5)

However, in the position paper for its review of the national access regime, the Commission noted that the access arrangements in the NEC 'result in a more prescriptive approach to the provision of access than regimes in some other sectors that rely more on commercial negotiations between the parties' (PC 2001a, p. 268). The Code effectively regulates prices and other terms and conditions of access. If such a regime were imposed on airports it would impose considerably stronger regulation than currently applies.

Box 11.4 **National Electricity Code**

The national electricity market is governed by the NEC, which is jointly administered by the ACCC, the National Electricity Code Administrator (NECA) and State regulators, and has three separate but related elements:

- an access code — rules governing the way in which participants gain access to and connect with transmission grids and distribution networks, including the principles for regulating access prices;
- market rules — rules governing how generators and customers trade through the common pool, and how the physical system is controlled; and
- administrative arrangements — rules governing how disputes are settled, how the code is enforced and changed, and establishing transitional arrangements for each participating jurisdiction.

Each transmission and distribution business owner or operator is required to submit an access undertaking consistent with the code. To streamline the process, NECA submitted an access code on behalf of service providers pursuant to section 44ZZAA of the TP Act. Service providers also have the option of submitting individual undertakings.

The ACCC, in the case of transmission services, and the relevant State regulator, in the case of distribution services, is required to determine an annual revenue requirement for the regulated assets under the principles set out in the code, and approve prices for the use of networks by third parties within that revenue requirement. The code also requires regulators to incorporate CPI-X or other incentive-based variants in the revenue caps to encourage providers to improve productivity.

Sources: ACCC (2000e); PC (2001a).

Industry-specific agreements or undertakings

Some participants in this inquiry supported a less prescriptive industry-specific approach, with greater reliance on commercial negotiation between airport operators and users.

Though SACL (sub. 27) preferred deregulation of prices, it outlined a proposal for a 'prices and quality undertaking' in the event that the Commission was of the view that some form of regulation was warranted. SACL suggested that section 192 of the Airports Act could be amended to allow airport operators to develop prices undertakings setting out the services covered, the prices to be charged for services, arrangements for varying prices, and the service levels to be provided.

On the other hand, Melbourne Airport proposed:

> … that s192 be repealed and replaced by an arrangement whereby those airport services that are considered to have market power sufficient to warrant price regulation may be regulated under a 'pricing undertaking'. Where airports were considered not to require regulation, or services provided at larger airports were considered contestable, regulation would be undertaken under the standard provisions of the TP Act. (sub. 7, p. 57)

In a subsequent submission, Melbourne Airport supported the SACL proposal for an approach allowing airport operators to develop prices and quality undertakings, though it continued to advocate replacement of section 192 by an industry-specific regime. Melbourne Airport suggested that development of undertakings by airport operators should be optional, and that the likelihood of declaration under Part IIIA would provide an incentive for the operators of large airports to develop undertakings. In its view, industry-specific legislation should specify:

- Items that a PQU [prices and quality undertaking] must contain (eg duration, definition of services etc) similar to Section 91 of the *Airports Act 1996* in relation to Major Development Plans.
- Requirement to consult and inform the Minister of the outcome similar to Sections 92 and 93.
- Matters the Minister must have regard to in approving a PQU similar to Section 94. These might include the impact on efficiency and investment, impact on competition on competition in other markets, the public interest (and in particular the interests of the travelling public) and ensuring that the PQU does not lead to any abuse of market power.
- Provisions for variations similar to Section 95.
- Relationship between the PQU and the National Access Regime more generally.
- Enforceability of charges levied under the PQU. (sub. 37, p. 14)

Though precise details were not specified, Westralia Airports Corporation (sub. 21) proposed a similar model:

> … whereby airports and airlines enter into commercially negotiated aeronautical services agreements, incorporating the scope and pricing of airport services, the conditions of use by airlines of the airport, the process for consultation and exchange of information and quality of service. Such agreements when accompanied by the access provisions of the Trade Practices Act and the significant countervailing market power of airlines would constitute an effective body of counter-measures to alleviate concerns over abuse of market power by airports. (sub. 21, p. 1)

It suggested these agreements may require legislative support such as a Government policy directive, which should provide guidance for abuse of market power and define key parameters of the airport–airline consultation environment that would apply in the absence of agreement between the airport and airlines.

The Department of Transport and Regional Services (sub. 39) supported a model that combined monitoring of prices and service quality with provision for development of commercial agreements between airport operators and users, backed up by scope for regulatory intervention if any market power were abused (see section 11.1 above).

The model advocated by Ansett, which in its view would provide flexibility for airports and airlines to reach commercial agreement while providing a framework to moderate the market power of airports, is a variation of the industry-specific approach to the development of commercial agreements. Though the model was not outlined in detail, its key features were:

- broad specification of the elements to be contained in the contractual agreements between airlines and airports;
- recourse to arbitration only if agreement on … individual elements cannot be reached, but with clear mechanisms to discourage unnecessary recourse to the arbitrator; and
- [specification of the] powers and procedures of the arbitrator. (sub. 42, p. 47)

The ACCC, on the other hand, in relation to access arrangements, suggested that although airports could be required to submit for approval a set of price and non-price terms and conditions applicable to the provision of the declared services at the airport and a dispute resolution mechanism:

> … experience with airport regulation in Australia to date suggests that there are a number of difficulties associated with putting in place *ex ante* terms and conditions for access to core airport services. These arise primarily from the fact that airports provide a range of interlinked but different (non-homogenous) services, and that the dynamics of the provision of those services is constantly changing in response to changing market conditions. As a result, it is difficult to establish generic terms and conditions that are

> sufficiently precise as to ensure that disputes will not arise in relation to their application in a particular case. (sub. 38, pp. 14–15)

While this may be the case, specification of *ex ante* terms and conditions as far as possible, combined with provision for variation of terms and conditions, may promote commercial negotiation and reduce compliance costs in many cases. Specification of dispute resolution mechanisms could provide a means to resolve disputes where commercial negotiation fails.

The ACCC suggested consideration could be given to an alternative model that involved:

> … the imposition by law (whether in the enabling legislation or in subordinate instruments) of certain 'standard access obligations'. These obligations could provide that airport operators provide access to the declared services on the basis of non-discriminatory, objective and transparent terms and conditions. The obligations could also include an obligation to ensure that prices reflect costs.
>
> Appropriate mechanisms would be required to enable the enforcement of those obligations, whether by way of court action initiated by the Commission and/or the arbitration of disputes as to whether those obligations have been fulfilled.
>
> … legislative obligations could be enforceable in the courts. Alternatively, or in addition, access seekers could be empowered to notify disputes for arbitration; in that event, the arbitration should be limited to determining whether or not the legislative obligations have been complied with. (sub. 38, p. 15)

However, the mandatory nature of this model, combined with requirements for non-discriminatory terms and conditions and mechanisms for enforcement of obligations, could result in significant regulatory intervention in firms' pricing decisions. The requirements for non-discrimination and for prices to reflect costs may be problematic because the supply of aeronautical services is characterised by substantial fixed, common costs. In this situation, price discrimination may be a very efficient way of recouping investment costs.

While a shift towards commercial agreements or undertakings is attractive, in the Commission's view, commercial agreements (or their contents) should not be made mandatory. This undermines the fundamental objective in promoting *commercial* relationships. Development of agreements on a voluntary basis, on the other hand, may promote commercial relationships and efficient outcomes. For example, if provision were made for a review of regulatory arrangements, and development of agreements was regarded as good behaviour, airport operators could be encouraged to develop agreements. The possibility of declaration under Part IIIA would also provide such an incentive.

Development of guidelines for commercial agreements, including consultation and dispute-resolution mechanisms, might be of some assistance to airport operators and users, at least during the transition from regulated prices.

Some participants supported regulatory approval of such agreements. However, this would require a prescriptive approach to the content of such agreements. On the other hand, provision for lodgement of agreements voluntarily entered into might promote transparency and user acceptance. Agreements could be lodged if they specified, for example:

- agreed terms and conditions (including prices) of airport use, including the services covered, service quality and information to be provided;
- dispute resolution mechanisms (for example, scope for independent arbitration);
- the period covered by the agreement; and
- procedures to be followed to vary the agreement.

Importantly, however, acceptance of lodgement would not involve an assessment by the regulator of the prices, terms or conditions agreed between the parties.

That such guidance may be helpful for commercial entities in a commercial environment may perhaps be surprising, but it reflects 'natural monopoly' characteristics, the pervasive effects of regulation, the historical ownership of airports and airlines, and the easy politicisation of issues in the industry.

DRAFT FINDING 11.3

Facilitation and encouragement of commercial agreements between airport operators and users has the potential to promote commercial relationships and efficient outcomes. Though undertakings could be developed under Part IIIA (once current declarations expire), an industry-specific approach may be more appropriate.

While the Commission considers that promotion of commercial agreements has many attractive features, further input from participants is invited as to how such agreements might be implemented including, in particular, the appropriate regulatory framework.

12 Appropriate regulation: the Commission's assessment

In this chapter, the Commission outlines its assessment of the need for price regulation of particular airports and airport services, and its preferred option for such regulation.

12.1 The Commission's task

It is worth repeating that the purpose of this inquiry, as set out in the terms of reference, is:

> to examine whether new regulatory arrangements, targeted at those charges for airport services or products where the airport operator has been identified as having most potential to abuse market power, are needed to ensure that the exercise of any such power may be appropriately counteracted.

In making its assessment and recommendations the Commission also is asked to take into account several 'principles':

(a) the CPI-X price cap applied to aeronautical charges during the first five year period of private ownership will no longer operate;

(b) future prices regulation should be applied to those aeronautical services and those airports where airport operators have most potential to abuse market power;

(c) airport operators may propose to the inquiry alternative approaches to prices regulation which would provide equal or better protection to users;

(d) prices regulation should minimise compliance costs on airport operators and the Government;

(e) prices regulation should promote the efficient operation of airports;

(f) prices regulation should facilitate benchmarking comparisons between airports, competition in the provision of services within airports (especially protecting against discrimination in relation to small users and new entrants), and commercially negotiated outcomes in airport operations; and

(g) the Commission may recommend more effective forms of prices regulation than are currently in place, where this may be necessary.

As noted in chapter 4, in essence these principles (many of which mirror the Competition Principles Agreement) suggest that any future regulation should be the least required to target the source of any problem and promote efficient outcomes, while being applied in a way that fosters market outcomes where feasible, imposes minimal compliance costs on all parties, and promotes transparency and competition. Importantly, the terms of reference guide the Commission to recommend regulation only where it is necessary to promote efficient outcomes.

12.2 Assessment of the need for regulation

The terms of reference require that regulation should be targeted only at those airports and those aeronautical services provided by airports where there is most potential to abuse market power.

Which airports have most potential to abuse market power?

As discussed in chapter 5, airports catering for regular public transport (RPT) can be described as 'natural' monopolies for several reasons:

- basic airport infrastructure, such as runways and taxiways, must be consumed as a package and thus requires a single provider of a large, lumpy investment;
- there is evidence of economies of scale at least in relation to runways and taxiways;
- most major aeronautical airport assets, other than land, cannot be used for other purposes and thus are sunk; and
- airports require very large land allocations and buffer zones for environmental and safety reasons and this may make duplication prohibitively costly (or, for planning and regulatory reasons, impossible) in convenient locations.

Network or coordination benefits also accrue to airlines and their passengers from using one large facility. Even if given the choice of two similar (uncongested) airports serving the same destination, airlines are unlikely to spread similar services across both.

Though this tendency towards natural monopoly arises from efficiency benefits (one airport in a particular location can provide services more efficiently than two), it also, inevitably, reduces scope for direct competition in the provision of airport services in that location.

Though barriers to entry appear very high, the degree of market power held by a particular airport will depend on the characteristics of the (derived) demand for that airport. This derived demand in turn will depend on: the share of airport charges in the airline ticket price (all else given, the smaller the share, the greater the airport's market power); the price elasticity of demand for air travel to that location (which will tend to vary with the type of market being served — holiday, business, or visiting friends and relatives (VFR) — and, therefore, the preparedness of and opportunity for these travellers to use alternative modes or to travel to other destinations); the scope for airport substitution (for the same destination); and the supply elasticities of other input suppliers.

Based on evidence of the market segments served by core-regulated airports, in chapter 5, the Commission concluded that core-regulated airports with most potential to abuse market power are Sydney, Melbourne, Brisbane and Perth airports. These four airports have high proportions of business and VFR (that is, destination-specific and more time-sensitive) passengers, do not appear to face significant competition for domestic passenger traffic from other airports, while their status as the main international ports of arrival and departure in the country may add to their potential market power (and leverage) in the domestic market. Competition among these airports for international traffic may moderate, though not eliminate, this latter effect.

Adelaide, Canberra and Darwin airports have been assessed as having moderate potential to abuse market power but remaining core-regulated airports (Hobart, Launceston, Alice Springs, Coolangatta, and Townsville) appear to have little ability to increase their charges above efficient levels without losing business and revenue.

Within the time frame for this inquiry the Commission has not been able to assess individually the market power of the more than 200 non-core-regulated airports (most of which are owned by local governments) that cater for some RPT air services. While the Commission has received some complaints about apparently excessive charges at a few of these airports, it would urge caution before assuming that high charges imply market power and that such charges warrant national regulatory intervention:

- the small traffic volumes of most regional airports suggest that efficient unit costs may be high;
- if the airport policy of councils does not reflect community wishes, then this arguably is more properly a local rather than national governance issue; and

- objectives other than the exploitation of market power also may explain the seemingly high charges at airports located at some holiday resorts. Indeed, resorts usually compete in highly-competitive tourist markets.

In addition, even if it were demonstrated that some of these non-core-regulated airports abused market power, the Commission considers it unlikely that, taking into account compliance and other regulatory costs, regulation would bring about net benefits. For example, the ACCC (sub. 36) concluded that, although Townsville Airport (a core-regulated airport) was likely to have some market power, the costs of continued price regulation were likely to outweigh any benefits. Townsville is the twelfth-largest airport in the country. Though the Commission does not agree fully with the ACCC's assessment of the extent of Townsville's market power, it shares the view that the costs of regulating prices of an airport the size of Townsville (or smaller) are likely far to outweigh any benefits.

In which services do airports have most potential to abuse market power?

For those airports assessed to have moderate to significant market power, their power will extend to the bundle of services for which there are few alternative suppliers and which an airline and passengers must consume when they arrive at, or depart from, the airport.

Based on the evidence presented in chapter 6, for those airports with significant market power, their market power appears to be strongest in those services provided by facilities for aircraft movements, including aircraft access to runway, taxiway and aprons; and vehicle access, including front-door access to the airport for passengers, transport providers, and off-airport car-parking providers.

There is a range of other airside services that are necessary for passenger and cargo processing but where there is some, albeit limited, discretion as to quality and quantity of service — for example, aerobridges, check-in facilities and baggage handling. This suggests that an airport's market power in some of these services may be somewhat less than for services provided by aircraft movement facilities, but still significant. Moreover, the airport's market power may vary between users and may change over time as the result of technological innovation. For example, some low-fare airlines prefer not to use aerobridges while others regard them as essential. Electronic check-in opens scope for off-airport processing and therefore some scope for competition in provision of this service.

The degree of airport market power in relation to aircraft refuelling is a particularly contentious issue. For some flights and some destinations, there is a degree of

discretion as to where an aircraft refuels, but this discretion is limited and, at more remote airports, probably non-existent. In other words, when an aircraft lands, not only must it use the runway, taxiway and apron, it typically also will require refuelling.

Areas where market power is likely to be more limited include international airline lounges (while some travellers might demand such facilities of some airlines, these seem to be discretionary services, at least with respect to quality and size), catering and cargo storage facilities and other services that feasibly can be located off-airport. Airports (and State Governments) also compete keenly for aircraft major maintenance facilities.

While passengers value the convenience of shops and food outlets at airports, the purchase of these services is largely discretionary: they do not have to be consumed as part of the 'bundle' of core aeronautical services and there are many alternatives to buying at the airport. Passengers also have choices in relation to duty-free purchases — destination, transfer, or origin airports; on-board duty free and downtown outlets; indeed, whether to buy or not. Airports appear to have very little, if any, market power in these activities.

Passengers require transport to and from an airport but typically there is a choice among modes (taxi, self-drive, public transport) that are not provided by the airport. For those who require parking, major airports face off-airport competition, at least for long-term parking (one day or more). Higher long-term on-airport car-parking charges appear largely to reflect greater convenience. The Commission is not aware of private airport operators restricting investment in car-parking to raise prices. Indeed, several major airports have undertaken and/or plan major car-park expansion. Though, of itself, this does not prove the absence of market power, expansion of on-airport car parks combined with scope for off-airport competition (car parking is not a natural monopoly), suggests that market power will be constrained. This assessment rests to some extent on the airport allowing access to potential competitors on reasonable terms and conditions. Airports may have somewhat greater market power in very short-term and airline staff car-parking.

Off-site and on-site alternatives to airport-provided taxi parking facilities are limited. Nonetheless, passengers and taxi drivers have some discretion in their use of these facilities — passengers can use other modes and taxis use the parking facilities only if they pick up passengers. On balance, the market power of airports in providing these facilities appears moderate, though this assessment also depends on the airport not restricting access to competing transport providers in order to bolster its market power in the provision of car parking. That is, airport operators, by controlling access to their 'front door' could attempt to limit competition from

off-airport providers of car parking or indirect competition from other transport providers (for example, taxis).

Is there a need for regulation of airports with most potential to abuse market power?

The terms of reference require the Commission to assess whether there is a need for regulation to counteract abuse of market power of those airports identified as having the most potential for such abuse. To make this assessment, the Commission has attempted to gauge likely efficiency and distributional outcomes if prices of airport services were not regulated (chapter 7).

Such an exercise necessarily is hypothetical — there are very few (if any) examples in Australia or overseas of large, privatised airports that are not subject to some form of airport-specific economic regulation. Even in the absence of airport-specific price regulation, major Australian airports effectively would be 'regulated' to some extent by the terms of their leases, the *Airports Act 1996* (Airports Act), international agreements, and general competition law including Parts IIIA and IV of the *Trade Practices Act 1974* (TP Act).

In chapter 7, some likely influences on the pricing and other conduct of unregulated airports with market power were considered.

- There is fairly strong evidence that non-aeronautical earnings generated by additional passenger throughput provide airports with an incentive to increase their profits by encouraging extra passengers to the airport (provided the airport is able to expand throughput). Even within the current price caps, some airports are reported to have offered low entry prices for new airlines and services. They also may try to attract additional passengers by providing better quality and increased capacity to accommodate them.
- Airports have an incentive to discriminate among users in their pricing in order to increase their profits. Such pricing has the potential to reduce the efficiency losses associated with market power because consumers with a higher elasticity of demand and for whom airport charges could form a more significant portion of the fare, pay less. Though airports are limited in the degree to which they can discriminate in pricing, efficiency requires only that consumption not be deterred at the margin. Weight-based airport charges (filtered through airline yield-management systems) combined with direct encouragement by airports of additional flights and new (low-cost) airline entrants provide some support for the view that the efficiency losses may not be large even if airports were to exercise their market power.

- To a considerable extent, airports' market power relies on the relatively small effect of an increase in airport charges on ticket prices. But this smallness may provide airports with some incentives to cooperate with other input providers (for example, in the tourism and aviation industries), especially if this is likely to reduce demand uncertainty. In other words, airports, by themselves, will have little influence over the attraction of their location, but they may be able to increase demand and/or reduce demand uncertainty by working with other providers who are in a better position to influence demand.
- Airlines and airports hold strongly opposing views on whether airlines have countervailing power. Available evidence suggests that the scope for competition in the aviation market will limit, though not rule out, this power. Airline market power is likely to be strongest in their dealings with smaller airports that have less commercial clout and a greater reliance on price-sensitive holiday markets.

The combined effect of these influences on the pricing levels of an airport with significant market power will be to constrain somewhat an unregulated airport's price increases above efficient levels. Scope for price discrimination would allow the airport to earn higher profits, while limiting the efficiency costs, by encouraging marginal consumers to use the airport.

Overall, the Commission considers it likely that, if prices of core-regulated airports were unregulated, average aeronautical charges would tend to rise above current levels. How far beyond their efficient cost-recovery levels aeronautical prices might increase at these airports (in the absence of *any* price regulation) cannot be predicted. Initially, any increases might largely reflect the inadequacy of current aeronautical prices inherited from the Federal Airports Corporation (FAC) pricing structure rather than market power per se.

As discussed in chapter 8, under the transitional price-cap arrangements, prices continue largely to reflect historical, single-till prices. Though buyers of privatised airports were aware of these starting prices and the productivity growth implied by the X values when they made their bids, and that prices could be increased as 'necessary new investment' was undertaken (suggesting that the starting prices were on the low side required for aeronautical cost recovery), just what constituted 'necessary new investment' was not clear. The price-cap regime was to apply for a five-year 'transitional' period. At its completion, some airports may be justified in seeking aeronautical price increases for investment in the future.

If airports with market power increased their prices above efficient levels, broadly speaking the losers would be passengers (paying higher fares) and airline owners (who may have to accept lower returns). While the Commission is not in a position

to make a judgement about preferred income distributions, it makes the following observations:

- there does not appear to be a large difference between income profiles of passengers and airline shareholders on the one hand and airport shareholders (with the latter group including several large superannuation funds) on the other;
- owners of both airports and airlines comprise Australian residents and non-residents; and
- many passengers are not Australian residents.

It is possible, of course, that higher airport charges deter airlines and consumers with the lowest willingness to pay (that is, low-fare airlines and budget-conscious travellers). However, if, as discussed above, airport charges can be levied in such a way that the charges proportionately fall more on those airlines and passengers with higher willingness to pay, then marginal passengers will not be squeezed out.

Pricing at capacity-constrained airports

Capacity-constrained airports (such as Sydney Airport, at least at peak times) will have a greater ability to increase charges and, if unregulated, face fewer incentives not to do so. In this case, however, the scope for higher charges in the face of excess demand does not reflect abuse of market power (provided the airport has not contrived to create the scarcity) — just that market-clearing prices, if allowed to be set, are likely to be high at certain times of day.

While such higher prices would increase airport profits, in the case of Sydney Airport they also are likely to promote more efficient use of the airport and have little impact on airfares to and from Sydney. As movement slots currently are allocated rather than sold, airlines are likely to be benefiting from the scarcity value of slots rather than their current passengers. The passengers, on average, already are paying higher (because of fewer non-discounted) fares to and from Sydney Airport at peak periods. Higher landing charges at peak times would ensure that, outside the regional ring fence, those airlines and their passengers who valued the slots most would receive them. However, some passengers travelling on services that are withdrawn or rescheduled to off-peak periods may be made worse off. Other services also may be affected if high airline yields from flights to and from Sydney support flights between other cities on which yields may cover marginal, but not average, costs.

Other abuses of market power?

In addition to raising prices, some participants considered that airports with market power would allow their costs to increase (at the expense of higher profits), invest inefficiently (either too little or too much), and/or allow quality to deteriorate.

As discussed in chapter 7, the Commission has not been persuaded by the argument that privatised airports, if unregulated, will operate in a highly inefficient manner. Indeed, the incentive to innovate and be more efficient was a major rationale for airport privatisation. In addition, there appear to be various mechanisms that would allow and encourage airport owners to monitor the performance of their managers, including some scope for competition between airports. Moreover, the risk of productive inefficiency is likely to increase with any form of price regulation, which inevitably will relate prices to costs incurred by the firm. And the risk of quality and investment distortions is likely to be greater with explicit price regulation than without it.

An airport may use its market power to deny access to the airport, either by way of higher prices or by imposing unacceptable access conditions. Though an airport is unlikely to have an incentive to deny access to airlines (the response of airports to new entrants seems to confirm this), it may have an incentive to deny access to competing providers in markets for services in which the airport itself is a provider or in which it could sell a monopoly licence.

12.3 Assessment of regulatory options

There are numerous regulatory options, several of which already operate in Australia and overseas. As discussed in chapters 10 and 11, these range from cost-based and rate-of-return regulation and price caps, to access arrangements and more light-handed approaches, including price monitoring and promoting commercial agreements.

Cost-based and incentive regulation

A regulatory framework that bases price increases on estimated costs of supplying the service tends to provide insufficient incentive for airports to operate efficiently. Indeed, such regulation may induce airports to operate inefficiently. Further, cost-related price increases require detailed assessments and estimation of capital and operating expenditures, valuation of land and other assets and an assessment of an appropriate rate of return on those assets including an assessment of risk, and projections of demand.

For airports, valuation of land appears doubly fraught because of the relative land-intensity of airports and the inherent difficulties of valuing land when prices are regulated (appendix F). This issue has been of major importance in assessing allowable cost-related aeronautical price increases at Sydney Airport and, arguably, is an area in which the valuation approach finally adopted bore little relation to the concept of economic (opportunity) cost. For a capacity-constrained facility, it is questionable whether costs incurred by the supplier are relevant — the economic cost in such circumstances is the benefit forgone by the user who cannot access the airport when desired.

Price caps can provide incentives for regulated firms to operate efficiently by allowing them to retain profits once they have achieved productivity targets built into a CPI-X price-cap formula. Thus price caps can avoid a major failing of cost-based regulation, at least for short periods during which firms can retain profits. Use of productivity benchmarks can also assist in setting price caps. But if prices of a regulated facility are not to persist at levels that deliver excessive profits or losses, they must converge to levels that (just) cover costs. Thus the need for detailed cost assessment seems inevitable even under price caps in order to ensure that there are adequate incentives for efficient investments. In particular, the regulator must assess investment proposals and determine the prices required to facilitate efficient investment.

Investment issues have been manifest in current price-cap arrangements for core-regulated airports. Inherited FAC starting prices that were not adequate to provide for efficient replacement investment on a 'dual-till' basis were combined with X values that incorporated expected productivity growth and some unspecified investments and (at least initially) ill-defined investment pass-through provisions. Buyers of airport leases knew what the respective X values were for the different airports, but it appears that there was uncertainty as to which types of investment were eligible to be funded by cost pass-through price increases and which required funding from existing revenue streams. As discussed in chapter 8, at the very least, this set of arrangements appears to have promoted 'gaming' and discouraged commercial negotiation.

Though some of these problems could have been avoided by a more transparent process and clearer investment guidelines from the outset, the inherent difficulty in implementing price caps — the need for regulatory assessment of investment — remains.

This need arises whether investment is provided for in the starting prices (as in the United Kingdom) or the X values, or assessed on an ongoing basis as investment proposals arise (as currently occurs for Australian core-regulated airports).

Each of these approaches has both attractive and unattractive features. The UK approach avoids the need for ongoing assessment of investment, and has the capacity to promote prices that are adequate for investment (though it should be noted that the single till that applies in the United Kingdom appears to have created some investment distortions). On the other hand, there is the huge task of assessing an airport's costs, investment, asset base and required rate of return over the regulatory period. The need for this initial assessment can be avoided if investment is considered on an ongoing basis, but other issues then arise. In particular, if current prices are somewhat below cost-recovery levels, almost all investment proposals need to be reviewed to assess whether higher prices are warranted. This process can be costly and protracted and although, in principle, it offers the opportunity for negotiation between airports and users, users may have an incentive to oppose some investments that may advantage competitors and lead to higher airport charges.

Accordingly, though price caps can provide better efficiency incentives than cost-based regulation, the Commission considers that price caps should be reserved for situations where excessive pricing is likely to result in significant inefficiency.

Coverage of price caps

Phase 1 and Phase 2 airports were sold with an undertaking that a single till would not be mandated. It appears that Sydney Airport will be sold on the same basis. Nonetheless, several participants have urged that price regulation be imposed on a single-till basis. For reasons discussed in chapter 10 and appendix C, the Commission considers that single-till regulation in practice would promote inefficient outcomes. Even at those airports where (marginal) prices exceed marginal costs, a single till will tend to reduce the incentives for airport operators to generate locational rents from non-aeronautical activities, creating additional efficiency losses.

The Commission therefore is of the view that any price cap should cover only those aeronautical services in which an airport holds significant market power and that appropriate prices for the basket of services should be determined without reference to non-aeronautical earnings. This would imply that any future price caps should include those aeronautical services currently falling within price caps plus, at some airports identified in chapter 6, aircraft refuelling services. However, inclusion of aircraft refuelling charges within price caps could raise issues in relation to any undertakings given to bidders at the time of airport privatisations.

Some participants have suggested that an aeronautical price cap should include other activities in which the airport might have market power, including parking

facilities for private vehicles and taxis. The Commission does not consider that there is a strong case for strict regulation of the prices of these services. However, if such regulation were considered desirable, their inclusion in an aeronautical price cap may not be the best option. Widening the till may reduce airport profits but may not lead to efficient use of landside space. And as with aircraft refuelling, price regulation of car parking in particular may conflict with undertakings given to bidders at the time of airport sales.

Price monitoring

Some aeronautical-related services at core-regulated airports currently are subject to price monitoring by the ACCC under the *Prices Surveillance Act 1983* (PS Act) (chapters 3 and 9). In another inquiry, the Commission has made a draft recommendation for repeal of the PS Act, with its replacement by a new provision for price monitoring (after an independent inquiry) in the TP Act.

Key features of this proposed new monitoring provision would be that monitoring would be for a limited period and that the information to be disclosed would be determined prior to the commencement of this period. The ACCC would be responsible for collating and auditing the information and its public dissemination. Though it may comment on the reported information, it could not make any determination on the appropriateness of prices nor make recommendations to the Government under this monitoring provision.

Thus, though airports would be required to provide information on, for example, prices, costs and profits, there would be no direct regulatory control over prices charged or revenues or profits earned. The impact of monitoring on an airport's pricing decisions would be through moral suasion, publicity, and particularly the threat of reintroduction of stricter forms of price regulation at the completion of the monitoring period. Such monitoring would be a less explicit or intrusive method for influencing airport behaviour than price caps or cost-based regulation, though it could have similar effects on pricing and costs.

Perhaps most importantly, replacing price caps with price monitoring has potential to encourage commercial negotiation between airport operators and users. It could reduce 'gaming' of the regulatory system, provided there were no immediate and automatic recourse to regulatory determination of prices, and provided negotiation were feasible. If a breakdown in negotiations about airport prices constituted grounds for re-regulation, this could undermine negotiated agreements if one party considered it could do better with regulation.

On the other hand, the potential for abuse of market power may be greater under a price-monitoring regime than under price caps or cost-based regulation. Such potential may be constrained by a well-defined and credible threat that the Government could reintroduce stronger regulation, such as price caps, at airports where market power clearly was abused. Monitored firms, however, would need to be given clear guidance as to what constituted 'good behaviour' and what did not. A broad set of principles might be preferable for guiding good behaviour than specific criteria that, applied in isolation, may not be consistent with efficient outcomes.

Access regulation and general competition law

Airport operators currently are subject to section 192 of the Airports Act and Part IIIA of the TP Act, while anti-competitive practices would be subject to Part IV of the TP Act. Though the five-year, automatic declarations of privatised, core-regulated airports cannot be renewed under section 192 as it currently stands, new airport-specific access arrangements or Part IIIA could continue to complement any future price regulation of airport services or, indeed, provide an alternative to an industry-specific price-regulation regime. Prices of airport services could be regulated indirectly through regulation of the terms and conditions of access to an airport service if a service were declared.

As discussed above and in chapter 7, airports may have some incentives to deny access where the airport directly competes in the market for the service or can control competition in a market through its control of access to the airport facility in question. Though, in such cases, application of access provisions might be appropriate, a critical question is whether this potential for denial of access and the characteristics of airports are such as to warrant continuation of airport-specific access provisions (as argued by Qantas Airways (sub. 48) and the ACCC (sub. 38)) or whether the general Part IIIA national access provisions are likely to be adequate.

For reasons discussed in chapter 11, the Commission has not been persuaded that there is a case for continuation of *special* access provisions for airports that impose weaker declaration criteria for airports than other industries.

Commercial agreements and access undertakings

Several participants, including several airports and Ansett, have suggested various 'midway' approaches where airports and airlines would enter commercial agreements on prices, quality and conditions of access, within a regulatory framework. While there is scope for undertakings under Part IIIA, most participants suggested an industry-specific approach.

The notion of promoting commercial agreements is very attractive. However, the Commission considers that, to be successful, any such agreements necessarily must be negotiated voluntarily, without automatic recourse to the regulator. Guidelines for such agreements (including consultation and model dispute-resolution mechanisms) might promote them, as would an indication that the agreements would be regarded as 'good behaviour' by airports. The Commission has sought additional input from participants as to how such agreements might be implemented, including the appropriate regulatory framework.

Though core-regulated airports subject to section 192 of the Airports Act currently cannot propose an access undertaking under Part IIIA, when the current five-year declarations of core-regulated airports lapse, scope for undertakings will re-open. While access undertakings provide an alternative means of airport regulation, the Commission notes that two draft applications for undertakings by airports were not approved by the ACCC and, more generally, the undertaking provisions under Part IIIA have been used rarely. The Commission concurs with Qantas that access declarations should not preclude an airport from submitting an undertaking (the Commission's concurrent inquiry into Part IIIA made such a recommendation in its Position Paper).

12.4 The Commission's assessment and preferred approach

Major Australian airports — Sydney, Melbourne, Brisbane and Perth — have significant market power in core aeronautical services. Some other capital city airports — Adelaide and Canberra and, to a lesser extent, Darwin — would seem to have a moderate degree of market power, but the remaining core-regulated, and non-core-regulated, airports appear to have much less market power.

This suggests that some form of price regulation is required for the four largest airports, though Sydney Airport raises some special issues that are discussed below. The Commission is not convinced that Adelaide, Canberra, and particularly Darwin, have significant market power and, indeed, they may be comparable with Cairns Airport (the sixth-largest in Australia, albeit State Government-owned) which is not subject to any price regulation. However, some form of monitoring may be appropriate for these smaller airports for the time being as a transitional measure.

The remainder, because they appear to have much less market power, should not be subject to any airports-specific economic regulation including price monitoring. (They would continue to be subject to the TP Act and the Airports Act.)

The Commission considers that two possible regulatory options merit consideration. The first essentially preserves the status quo for airports with significant market power (but with some improvements to the regulatory regime) and replaces price caps with new price-monitoring arrangements for Adelaide, Canberra and Darwin airports. The second accelerates progress along the path towards a more commercially-oriented approach, as envisaged when the airports were privatised. Before outlining these options, Sydney Airport raises some special issues.

Sydney Airport

Though there will be excess demand for some facilities at all airports from time to time, a small land site (and no room for major expansion), plus a movement cap and a curfew on aircraft movements, and the regional 'ring fence' together mean that Sydney Airport has excess demand for several hours a day.

Currently there seems to be scope at Sydney Airport at peak times to raise prices significantly above current levels, and thereby promote more efficient use of the airport, even after increases of the order of 100 per cent in 2001. Though prices pressing towards market-clearing levels at peak times are likely to promote use of the facility by those who value it most even if ring-fenced regional flights were quarantined from price increases, the airport could earn large profits, reflecting the scarcity value of slots. This would be more at the expense of airlines than their passengers as the scarcity value of the slots appears likely to be factored into fare structures already, through a scarcity of discounted fares to and from Sydney at peak times.

Moreover, given the massive investment required to establish a second airport and the need to encourage passengers and airlines to use it once it is built, higher prices at Sydney Airport may be required to signal to users the opportunity costs of using that conveniently-located facility.

Of course, if higher prices charged by Sydney Airport at peak times were anticipated at the time of sale of the airport, these scarcity rents largely would accrue to the Commonwealth Government on behalf of taxpayers.

Though there are strong economic arguments in favour of prices reflecting the value and opportunity costs (including congestion costs) of using Sydney Airport, any such decision also will be guided by potential distributional effects of higher charges on those who might forfeit peak period access. (Services on some other routes also may be affected if average costs of these flights are being covered by higher airline yields on Sydney routes.)

But whatever the decision about appropriate future policy at Sydney Airport, for that policy to be factored adequately into the sale price, bidders must be given clear guidance about the regulatory framework that will apply to the airport. The need for such clarity is underscored by the uncertainty and disputation that has been associated with the lack of transparency and specificity of the current price-cap regime applying to core-regulated airports already privatised.

Option A: Modified status quo

Option A provides for a more cautious pace of change and comprises:

- a CPI-X price cap for Melbourne, Brisbane and Perth airports only;
- for Sydney Airport, for reasons discussed above, preferably regulatory arrangements that allow aeronautical prices that reflect opportunity costs incurred by airlines and their passengers of using the facility rather than costs of production incurred by the airport. If for distributional reasons this is not acceptable, at the very least, current aeronautical prices should not decline in real terms and should be adequate to encourage efficient, feasible expansion of aeronautical capacity at that facility. At most there could be price notification for aeronautical price increases above the CPI. Price increases should be allowed to reflect peak period demand and to accommodate investment;
- for Melbourne, Brisbane and Perth airports (and Sydney if it is subject to price notification or other regulation), aeronautical price regulation should be applied on a dual-till basis where the till incorporates only those aeronautical services in which the airports are likely to have significant market power (this would probably include refuelling services but not other services currently designated as aeronautical-related, such as car parking or check-in counters). Profits earned in non-aeronautical activities, such as retailing or car parking, should not be taken into account in setting the price cap or determining allowable price increases;
- where any of these airports had exercised significant market power in any non-aeronautical or aeronautical-related activity, separate regulation might be appropriate (for example, price monitoring). Based on the evidence so far, the Commission considers that car-parking and taxi-parking services should *not* be subject to explicit price regulation and should not be included in an aeronautical price cap;
- for those airports subject to a price cap, because of information requirements, intense regulatory involvement and various incentives for inefficient behaviour, there does not appear to be a clear-cut case in favour of either a CPI-X model that incorporates all investment in the starting prices or Xs (along the lines of the

UK model), or one that deals with investment on an ongoing basis (as currently operates in Australia). But whichever approach were adopted, it should not hold prices below levels required for efficient investment. Further, to reduce gaming and to promote efficient investment, at the commencement of the regulatory period all parties must be informed precisely how different types of investment are to be accommodated either within the price-cap or cost pass-through provisions;

- Adelaide, Canberra and Darwin airports to be subject to new price-monitoring arrangements (as outlined below in Option B) rather than price caps, with no airports-specific economic regulation of remaining core-regulated airports;
- quality monitoring to continue at all airports subject to price caps or monitoring; and
- access provisions for airports that mirror the generic declaration criteria in the Part IIIA national access regime. An airports-specific access regime should continue only if procedural improvements, such as scope for multilateral arbitrations, are not made to the national access regime.

Option B: Continuing reform

This option would extend lighter-handed regulation to *all* major airports for a *probationary* period, specifically:

- mandatory price monitoring by the ACCC of airports assessed as having moderate to significant market power: namely Sydney, Melbourne, Brisbane, Perth, Adelaide, Canberra, and Darwin airports. The monitoring regime would continue for five years. During this *probationary* period, the regulator would not have the power to alter the monitoring regime or impose stricter price regulation. Indeed, the success of the monitoring regime would rely on all parties to the regulatory 'contract' accepting that there will be no easy recourse to regulated outcomes or to reintroduction of stricter regulation during the designated period;
- information requirements that would be specified at the commencement of the period and that could not be amended. The (audited) information would include prices of aeronautical services, and revenues, operating and capital expenses, various earnings measures, and quality indicators, for both aeronautical and non-aeronautical activities. An annual report presenting all monitored information would be made publicly available, with commentary by the ACCC (and auditors) where it was considered warranted, but without overall assessment of the success or otherwise of monitoring;
- encouragement of voluntary commercial agreements by providing guidelines regarding coverage and consultation and dispute-settlement mechanisms;

- guidelines for what would be regarded as 'good behaviour' by airports and airlines;
- an independent, public review (not by the regulator) towards the end of the five years to ascertain the need for any future price regulation (including price monitoring or more stringent price regulation); and
- as for Option A, access provisions for airports that mirror the generic declaration criteria in the Part IIIA national access regime. An airports-specific access regime should continue only if procedural improvements, such as scope for multilateral arbitrations, are not made to the national access regime.

Preferred approach

By confining price-cap regulation to those airports considered to have the most significant market power, and also by requiring clarity in the setting of caps regarding treatment of investment, Option A would, in the Commission's view, generate some net benefits compared with current regulatory arrangements.

But the Commission has not been persuaded that there is a strong case for continuation of strict price control (viz price caps) for *any* privatised core-regulated airports, for the following reasons:

- price caps almost inevitably entail intense regulatory assessment of, and involvement in, investment decisions and therefore should be used only where the efficiency costs of abuse of market power are significant;
- though these airports have market power, the case that they will act as monopolists that bring significant economic inefficiencies in the absence of strict price regulation has not been established — there appear to be strong commercial incentives, including the scope for increased profits in non-aeronautical activities from increasing passenger volumes, pulling in the other direction; and
- while the Commission agrees that some transitional problems with current price-cap arrangements and investment cost pass-through provisions in particular may have been settled, the risk of regulatory failure — which could be said to go with the territory of price caps — remains high. Compliance costs also are likely to remain high.

Therefore, the Commission considers that Option B offers a much better opportunity for promoting the principles for regulation outlined in the terms of reference — efficient operation of airports, commercially-negotiated outcomes, minimal compliance costs, targeting of those airports and services where operators have the most potential to abuse market power, facilitation of benchmarking

comparisons, and promotion of competition in the provision of services within airports.

This recommendation rests on a judgement about likely behaviour of major airports. During the proposed five-year probationary period, the onus largely will rest on regulated airports to demonstrate their willingness to operate without exercising market power. Equally, strategies on the part of airlines aimed at undermining the regulatory regime should not be rewarded with stricter price controls in subsequent periods. In this regard, the proposed length of the monitoring period is crucial. If it were too short, some parties might be encouraged not to deal in good faith, in order to increase the likelihood of re-regulation. If it were too long, airports with market power might have an incentive to make use of that power. The Commission's preliminary view is that five years would achieve about the right balance.

Parties would need to be given guidance as to what was acceptable conduct and what was not and would be encouraged to negotiate commercial agreements. While guidelines for such agreements should not be prescriptive, the Commission sees a role for formal guidance to assist all parties. Nonetheless, defining such behaviour may be difficult — high prices may be a signal that new investment is required rather than an indication that monopoly prices are being charged, high profits might reflect entrepreneurial skills rather than market power, and increases in prices may simply reflect changes in costs or that prices previously were too low. In a congested airport, high prices may be a means to allocate the available capacity efficiently. This suggests that a broad set of principles might be preferable for guiding good behaviour than specific criteria that, applied in isolation, may not be consistent with efficient outcomes.

The Commission seeks participants' views regarding criteria for 'good behaviour'.

While some participants have questioned whether commercial negotiations are feasible in this industry, the Commission notes that airlines deal directly with numerous unregulated privately- and publicly-owned smaller airports and some larger ones (for example, Cairns). This is not to say that relations always will be smooth, just that there seems to be scope for reasonably normal commercial relationships between airports and users, provided there is some effective, ultimate constraint on abuse of any market power.

The Commission accepts, however, that some parties may find this shift difficult, particularly given the long history of government provision of airport services at major airports and pricing structures which effectively subsidised aeronautical charges. Even if price caps were to continue to operate, aeronautical charges are likely to increase to some degree if a dual till is to apply in future.

The Commission also draws attention to the continued application of access provisions and Part IV of the TP Act to airports. These provisions, especially access provisions, would provide a quite powerful deterrent against excessive pricing by airports and, indeed, engagement in any other anti-competitive practices. Potential application of access regulation also should encourage airports to enter into agreements regarding prices and conditions of airport use. However, the Commission would recommend that declaration of core airport facilities for access purposes should not proceed unless the Minister was of the view that the monitoring regime demonstrably, and irrevocably, had failed and that an airport's behaviour was such as to be causing significant efficiency losses.

While Option B is the Commission's strongly preferred approach, it accepts that this would involve a considerable shift from current arrangements, albeit a shift largely envisaged by the architects of the current regulations at the time of airport privatisations. Importantly, the Commission considers that the full benefits of privatisation of airports are unlikely to be realised if commercial relationships between airports and airlines continue to be heavily influenced, and possibly constrained, by strict price regulation. In particular, the Commission considers that the ongoing need for substantial investments at major airports requires a more commercial and cooperative approach. In this regard, regulation that constrains prices at low levels could impose large costs on consumers in the longer term.

DRAFT RECOMMENDATION 12.1

The Commission recommends that a new industry-specific monitoring regime be introduced for major airports for a probationary period, comprising:

- ***mandatory price monitoring by the ACCC of Sydney, Melbourne, Brisbane, Perth, Adelaide, Canberra, and Darwin airports. The monitoring regime should continue for five years. During this probationary period, the regulator should not have the power to alter the monitoring regime or impose price regulation;***
- ***specification of information requirements at the commencement of the period. These requirements should not be amended during the period. The (audited) information should include prices of aeronautical services, and revenues, operating and capital expenses, various earnings measures, and quality indicators, for both aeronautical and non-aeronautical activities. An annual report presenting all monitored information should be made publicly available, with commentary by the ACCC (and auditors) where considered warranted, but without overall assessment of the success or otherwise of monitoring;***
- ***encouragement of voluntary commercial agreements by providing guidelines for coverage, consultation and dispute-settlement mechanisms;***

- ***guidelines for what would be regarded as 'good behaviour' by airports and airlines;***
- ***provision for an independent, public review (not by the regulator) towards the end of the five years to ascertain the need for any future price regulation (including price monitoring or more stringent price regulation); and***
- ***access provisions for airports that mirror the generic declaration criteria in the national access regime in Part IIIA of the Trade Practices Act 1974. An airports-specific access regime should continue only if procedural improvements, such as scope for multilateral arbitrations, are not made to the national access regime. Declaration of core airport facilities for access purposes should not proceed unless the Minister was of the view that the monitoring regime demonstrably, and irrevocably, had failed and that an airport's behaviour was such as to be causing significant efficiency losses.***

Airport-specific price-monitoring arrangements could be incorporated either in the Airports Act or the TP Act, but should be consistent with any generic price-monitoring provisions that may be introduced into the TP Act following the current review of the PS Act.

In short, the Commission considers that there are two broad choices for regulation of airports. The first improves upon the status quo principally by targeting price caps to the largest airports only and by requiring well-specified and transparent investment provisions. However, price caps would require continued intense regulatory involvement in these airports. The second strives for a more commercially-oriented approach but one that is designed to deter the abuse of any market power. On the weight of the evidence and its analysis so far, the Commission inclines strongly to the second option.

APPENDIXES

A Terms of reference: correspondence

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PRODUCTIVITY COMMISSION
From the Chairman's Office

15 February 2001

Senator the Hon Rod Kemp
Assistant Treasurer
Suite MF22 Parliament House
Canberra ACT 2000

Dear Minister

Re: **Productivity Commission Inquiry into Prices Regulation of Airports**

As you know, the Commission is still at a very early stage of its Inquiry into Prices Regulation of Airports. However, following consultations with participants, a matter has arisen such that I am seeking clarification of part of the Terms of Reference received by the Commission on 21 December 2000.

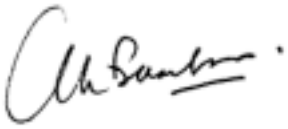
Under Paragraph 7 of the Terms of Reference, the Commission is asked to report on whether there is a need for prices regulation of airports, and the appropriate form of any prices regulation, taking into account a number of principles, the first of which states:

(a) the CPI-X price cap applied to aeronautical charges during the first five-year period of private ownership will no longer operate.

The Commission understands that Paragraph 7(a) essentially conveys the Government's intention that the current price cap arrangements for Phase I and II airports will cease after five years of operation. It is also our view that paragraph 7(a) is not intended to preclude from consideration price cap arrangements of the general form of CPI-X as an option for future prices regulation of airport services, should some form of prices regulation be regarded as appropriate.

Your confirmation that this general approach to prices regulation can be considered in this Inquiry as one of a range of options where there is most potential for abuse of market power, would be appreciated. In view of the present uncertainty, we would need to communicate to participants your clarification of this matter.

Yours sincerely



Gary Banks

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20 APR 2001

Mr Gary Banks
Chairman
Productivity Commission
Level 28, 35 Collins Street
MELBOURNE VIC 3000

Dear Mr Banks

Re: **Productivity Commission Inquiry into Prices Regulation of Airports**

Thank you for your letter of 15 February 2001, seeking clarification of part of the Terms of Reference provided to the Commission on 21 December 2000.

Your understanding, that Paragraph 7(a) essentially conveys the Government's intention that the current price cap arrangements for Phase I and II airports will cease after five years of operation, is correct. Paragraph 7(a) is not intended to limit the Commission's options for future prices regulation of airport services, should the Commission's inquiry find that some form of prices regulation is appropriate. Price cap arrangements of the general form of CPI-X can be considered by the PC, as one of a range of for future prices regulation of airport services, should they be considered necessary.

I trust that this clarifies the matter for you.

Yours sincerely

ROD KEMP

B Public consultation

B.1 List of submissions

Participant	*Submission no.*
Adelaide Airport Limited	20
Aero-Tropics Air Services	3
AMP Henderson	10
Ansett Australia/Air New Zealand	42
Australian Airports (Townsville) Pty Ltd	14
Australian Airports Association	15
Australian Competition and Consumer Commission	36, 38, 49
Australian Council for Infrastructure Development	28
Australian Taxi Industry Association	4
Board of Airline Representatives of Australia Inc	26, 41
Brisbane Airport Corporation Limited	8, 44
Capital Airport Group	32, 45, 46, 47
Department of Industry, Science and Resources	40
Department of State and Regional Development (Vic)	23
Department of Tourism, Racing and Fair Trading (Qld)	6
Department of Transport and Regional Services	39
Department of Transport and Works (NT)	24
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Hobart International Airport Ltd	11
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International Air Transport Association	9, 43
Launceston Airport	35
Lewis, Peter	1
Melbourne Airport	7, 37
MTAA Superannuation Fund Pty Ltd	22, 34
Northern Territory Airports Pty Ltd	25, 50

Perth Airports Municipalities Group	12
Qantas Airways Limited	48
Queensland Transport	31
Scott-Bloxam, W.H.	2
South Australian Government	33
Stott, Donald	29
Sydney Airports Corporation Limited	27
Tourism Tasmania	13
Virgin Blue	30
Western Australian Government	17
Westralia Airports Corporation Pty Ltd	21

B.2 Visits

Adelaide Airport Limited
Airport Co-ordination Australia
Airservices Australia
AMP Henderson
Ansett Australia
Australian Airports Association
Australian Competition and Consumer Commission
Australian Federation of International Forwarders
Australia Pacific Airports Corporation
Board of Airline Representatives of Australia Inc
Brisbane Airport Corporation Limited
Bureau of Transport Economics
Cairns Port Authority
Capital Airport Group
Commerce Commission (New Zealand)
Department of the Treasury (Cwlth)
Department of Transport (NSW)
Department of Transport and Regional Services (Cwlth)
Impulse Airlines
New South Wales Treasury
OECD (Secretariat Competition Policy)
Office of Asset Sales and IT Outsourcing
Qantas Airways Limited

Queensland Transport
Regional Airlines Association of Australia
Sydney Airports Corporation Limited
The Cabinet Office (NSW)
Virgin Blue

B.3 Public hearing participants

New South Wales

Australian Airports (Townsville) Pty Ltd
Australian Taxi Industry Association
Impulse Airlines

Victoria

Adelaide Airport Limited
Ansett Australia
Australian Airports Association
Australian Council for Infrastructure Development
Australia Pacific Airports Corporation
Board of Airline Representatives of Australia Inc
Brisbane Airport Corporation Limited
Capital Airport Group
Gold Coast Airport
Hobart International Airport Ltd
MTAA Superannuation Fund Pty Ltd
Northern Territory Airports Pty Ltd
Professor Peter Forsyth
Qantas Airways Limited
Sydney Airports Corporation Limited
Virgin Blue
Western Australian Government
Westralia Airports Corporation Pty Ltd

C Aeronautical and non-aeronautical services

This appendix explores some issues arising from the complementary provision of aeronautical and non-aeronautical services at most major airports, specifically:

- implications for pricing of aeronautical services;
- the distinction between locational rents and monopoly profits; and
- arguments for and against 'single-till' regulation.

The implications of non-aeronautical earnings for aeronautical prices and single- and dual-till issues also are discussed in chapters 7 and 10 respectively.

C.1 The effect of non-aeronautical profits on aeronautical charges

As noted in chapter 2, in 1999-00, all core-regulated airports in Australia, except Coolangatta, earned more revenue from so-called non-aeronautical activities (essentially property and retail activities from which airports receive rental and/or royalty payments) than provision of aeronautical services. While these commercial services typically complement the core aeronautical services provided by the airport,[1] they do not have to be consumed as part of the core 'bundle' of aeronautical services. For example, as discussed in chapter 6, international passengers can choose where they buy duty-free goods (and whether or not they buy duty-free at all); airlines can choose where to locate maintenance facilities etc. Despite this competition, it would appear that, for most core-regulated airports, profitability of non-aeronautical services exceeds that of aeronautical activities. The report prepared for the ACCC by KPMG (sub. 36, attachment A) provides evidence that this result is not attributable to arbitrary allocation of costs across the two categories.

[1] Not all services are complementary, however. As noted in chapter 2, some airports are developing business parks that appear as dependent on local business as on the airport.

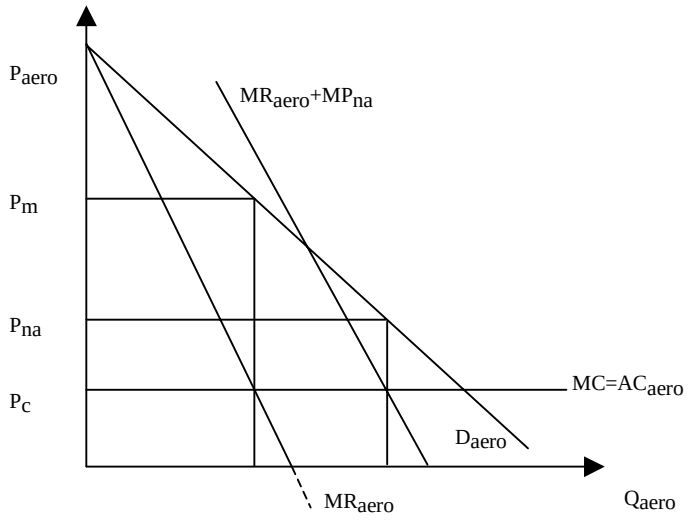
The current imbalance in profitability may reflect current regulation of aeronautical charges. In the absence of price-cap regulation, airports may raise aeronautical charges and their profits from this sector.[2]

Whatever the 'stand-alone' profit-maximising level of aeronautical charges, if airports are able to earn additional profits from non-aeronautical goods and services provided at the airport, they will have an incentive to reduce the (unregulated) prices of aeronautical services below the level that would apply without the non-aeronautical profit, provided the demand for aeronautical services responds to its price. The key requirement is that the demand for non-aeronautical services (and hence profits from these activities) flows directly from consumption of aeronautical services, not the other way around.[3] As noted by Kahn:

> The critical condition for such a cross-subsidization (pricing one of the complementary products below its separate incremental cost) is that the cross-elasticity of demand for the complementary service be high enough to compensate for the out-of-pocket losses on the sales of the first of these, considered in isolation. (Kahn 2001, p. 17)

Figure C.1 below illustrates the possibility. The diagram is a modified version of Starkie's exposition (Starkie 2001c).

Figure C.1 **Aeronautical pricing with non-aeronautical profits**



[2] This could result from market power but it may just be the case that current charges are below levels consistent with cost-recovery and would tend to rise even in the absence of any market power (chapter 8 and ACCC, sub. 36).

[3] This condition appears to be met at airports. It is unlikely that people primarily visit an airport to shop and decide to take a flight while they are there.

The figure shows a stylised price of, and demand for, aeronautical services (eg for landings or use of terminal facilities) at an airport. As drawn, the demand curve is downward-sloping and therefore assumes that the airport has some market power. For simplicity, marginal (and average) costs of providing these facilities are assumed to be equal and constant. The efficient, economic welfare-maximising price for aeronautical services is P_c. An unregulated, profit-maximising airport, in the absence of non-aeronautical profits, would set the price for aeronautical services at P_m (assuming price discrimination is not feasible), at which price marginal revenue equals marginal cost.

The constructed line $MR_{aero}+MP_{na}$ combines marginal revenue from aeronautical services and marginal profits (marginal revenue minus marginal costs) from the provision of non-aeronautical services. Again for simplicity, marginal profits from non-aeronautical activities are assumed constant per aircraft movement (and hence $MR_{aero}+MP_{na}$ is drawn parallel to the MR_{aero} curve).

The rationale for this is that, in setting aeronautical prices, a profit-maximising airport will take into account all additional profits that flow to the airport from attracting an additional user of its aeronautical facilities. The price of aeronautical services now will be set where $MR_{aero}+MP_{na}$ intersects the MC_{aero} curve, that is, at P_{na}. As drawn, this price still exceeds the efficient price, P_c, though it is feasible that, if non-aeronautical marginal profits are large, and demand for aeronautical services is not highly inelastic, unconstrained airport pricing could result in aeronautical charges below their average cost. (Indeed, they could be negative.) While the airport forfeits profits from aeronautical activities due to the reduction in their price, this loss is more than compensated by additional profits from non-aeronautical activities. This expansion of passenger throughput will continue until the marginal profit forgone from aeronautical activities equals the marginal profit earned from non-aeronautical activities.

In other words, where users of aeronautical services have complementary demands for non-aeronautical services, a profit-maximising airport will have an incentive to attract more customers to the airport by reducing its aeronautical charges. How large the (absolute) reduction in the price of aeronautical services will be is an empirical matter, depending on the marginal profitability of non-aeronautical activities.

For highly-congested airports where increased aircraft throughput is not feasible, or for those airports where non-aeronautical activities are not profitable at the margin, or are profitable but are not linked to increased aeronautical traffic, prices for aeronautical services will be set on a ‘stand-alone’ basis.

It is possible that, even where demand and profit increases are feasible, prices will not be reduced for *all* users of aeronautical facilities. Airports (uncongested) have an incentive to target price discounts to marginal airlines and passengers, especially those who contribute more to non-aeronautical profits (eg international passengers).

In addition, an airport might seek to encourage traffic growth by expanding capacity (at a given price) or encourage passenger spending by improving airport quality rather than by reducing aeronautical prices. The mix of incentives selected will depend on the marginal consumer being targeted — additional flights or a new airline might be encouraged by rebates or discounts on aeronautical charges, or marketing assistance or the provision of additional facilities. Passenger spending may be encouraged by the provision of attractive terminals and quick processing.

Additional airport profits from related non-aeronautical activities may also augment airlines' bargaining power: the potential loss of airport profits will be greater for any threatened reduction in services by airlines.

C.2 Non-aeronautical profits: locational rents and/or market power?

The above analysis rests on the assumption that non-aeronautical activities generate pure profits to the airport — that is, profits in excess of rates of return necessary to maintain supply of the good or service. This might suggest that any reduction in prices of aeronautical services (and reduction in the monopoly deadweight loss caused by pricing above marginal cost) largely would be offset by increased prices (and associated efficiency losses) in the provision of non-aeronautical services.

However, non-aeronautical profits may reflect 'quasi-rents' accruing to location rather than market power per se. Economic rent is the payment made to a factor above that needed to keep it in its current use. If a factor has some alternative uses, at the margin it may earn no rent (payment to the factor will just reflect its value in an alternative use), though it may earn infra-marginal economic rent.

Airports typically act as landlords to providers of retail services, maintenance facilities, etc. Airport revenue from these activities accrues as rentals and/or royalties to the scarce factor — in this case, designated airport land — which core-regulated airports, in turn, lease from the owner, the Commonwealth Government.[4]

4 Some airport operators also might just be very good at developing profitable ventures at airports, though it might be expected that skilled personnel would retain a reasonable share of any quasi-rents in the form of higher remuneration.

Provided airports do not constrain artificially the provision of space for non-aeronautical facilities, profits earned from providing such space will reflect locational rents that, in turn, reflect the inherent scarcity of land proximate to an airport. An airport's ability to raise prices through artificial scarcity will be constrained by the ability of concessionaires to locate, and consumers to purchase, elsewhere. For example, any monopoly profits (that is, in excess of location quasi-rents) earned from car parking are likely to encourage off-airport providers and substitution by airport users to other travel modes.[5] Monopoly retail rentals will drive concessionaires to re-locate because uncompetitive rentals cannot be passed on to consumers (who, in turn, have a range of choices where to buy these goods and services).

Importantly, if profits from non-aeronautical services only reflect locational rents, they generate no efficiency loss — at the margin, the rental paid for land used in a particular non-aeronautical service will reflect the opportunity cost of *not* using that land to provide the highest-valued, alternative, competitive, non-aeronautical activity.

Moreover, intervention that discourages such rents being earned unambiguously will reduce welfare because scarce resources will not be allocated to their highest-valued use. Economic surplus will be forfeited. This result contrasts with the potential for intervention aimed at reducing monopoly profits to enhance welfare. This is because monopoly profits are transfers from consumers to the monopolist, brought about by an inefficient level of supply to the market.

C.3 Arguments for and against a single till

Privatised, core-regulated airports in Australia have been regulated on a so-called dual-till basis. That is, only those *aeronautical* services in which the airport is considered likely to have market power have been regulated under price caps. Airports have been free to set rentals and prices for retail and other commercial activities. Car-park prices have been monitored by the ACCC (chapter 3) but car-parking revenue has not been taken into account when setting the price caps.

This contrasts with the single-till regulatory arrangements for major airports in the United Kingdom where revenues from non-aeronautical services are subtracted from expected airport-wide costs in order to determine allowable revenue from aeronautical services. A similar single-till system was used to set aeronautical charges at FAC-operated airports prior to privatisation — aeronautical charges

5 However, the airport's control over 'front-door' access may allow it to influence competition from off-airport car-park providers and other travel modes (chapters 6 and 7).

covered residual capital and operating costs (plus a real rate of return on capital) after taking into account projected revenues from non-aeronautical activities.

The ACCC's draft decision on proposed price increases at Sydney Airport (ACCC 2001h) suggested a limited single till (though described as a 'modified dual till') that would have transferred around $20 million of annual car-parking and other 'aeronautical-related' revenue to reduce 'stand-alone', cost-based aeronautical charges.

Privatised core-regulated airports appear to have been sold on the basis that a single till would 'not be mandated', and the Commonwealth Government, in April 2001, directed the ACCC to implement a dual till at Sydney Airport (Direction No. 22). But, as outlined in chapter 10, several participants (Board of Airline Representatives of Australia (BARA), sub. 41; Ansett, sub. 42; Qantas, sub. 48) have argued in favour of airport price regulation on a single-till basis.

One argument put for a single till is that profits earned in non-aeronautical activities reflect market power rather than economic (locational) rent. If this were the case, the single till may not prevent excessive pricing of non-aeronautical services by airports — it merely would require that monopoly profits earned in non-aeronautical activities were transferred to airlines and their passengers. However, the single till could remove the incentive to earn these profits, and if this occurs, they could not be applied to reduce aeronautical charges. This would be a desirable, if unintended, consequence of a single till. If prices of non-aeronautical services reflected market power, it might be more appropriate to reduce them directly to promote efficient consumption and to protect consumers of the service.

BARA (sub. 41), Ansett (sub. 42) and Qantas (sub. 48) argued that efficient pricing of airports requires that any locational rents earned from non-aeronautical activities by airports should be applied to reduce aeronautical charges. BARA demonstrated that, if there were two identical airports (including, it must be assumed, with respect to location), competition for customers would ensure that both airports earned normal profits. But not all locations are equal. Even in competitive industries, fixed factors such as land earn quasi-rents that are driven by the willingness of consumers to pay more for relative convenience etc. Thus, even if there were competing airports operating in a city, some would be preferred to others. Prices at those preferred airports could be higher and locational rents could be earned by owners of the site.

Ansett (sub. 42) makes a similar argument based on airlines being the equivalent of anchor tenants at retail complexes. However, anchor tenants generally will pay higher rentals at shopping complexes located in premium locations even though they may pay a lower rate than other tenants.

As noted by the UK Civil Aviation Authority (CAA):

> Given the cost structure of airports and the diverse services which they provide … it is unlikely that the provision of airport services would be perfectly competitive … Moreover, given that capacity constraints are the key issue for the industry, this characterisation assumes that scarcity rents which follow from planning restrictions should necessarily be clawed back by the regulatory regime. This has not occurred in the case of supermarkets … or in other markets where scarcity rents exist … (CAA 2000f, pp. 11–12)

Demand complementarities between aeronautical and non-aeronautical services provide another possible rationale for the single till. The argument here is similar to that concerning anchor tenants: airlines deliver passengers who generate non-aeronautical profits to the airport and these additional profits should be factored into (lower) aeronautical prices. As discussed in section C.1 above, an airport will have an incentive to encourage additional services and passengers to increase its profits to the extent such complementarities exist. It does not appear necessary to regulate to ensure such behaviour.

Another argument for a single till is that a multi-product monopoly (with a requirement to be (just) self-financing) should be encouraged to set prices in each market to minimise efficiency costs — that is, to implement Ramsey pricing (Crew and Kleindorfer 2001). Generally, this means that markets with relatively inelastic demand bear a greater share of common, fixed costs than markets with more elastic demand.

In this vein, the Motor Trades Association of Australia Superannuation Fund (MTAA Super Fund) (sub. 22), while arguing against the need for price regulation of airports, suggested that if price caps were imposed, a single till would promote greater pricing efficiency compared with a dual till. However, the MTAA Super Fund appears to argue that price regulation should apply to prices of all airport *outputs*, rather than just the activities of the airport operator. In this case, prices of goods and services in competitive activities would not contain excess profits (rentals charged by airports being included as a cost of supplying those services) and, therefore, might not be expected to contribute to the fixed costs of aeronautical activities. This is not the outcome sought by most proponents of a single till who would draw the single-till boundary such that only those services provided by the airport operator were included in the 'till'.

Application of the multi-product monopoly model to airports may not be appropriate if airports do not have market power in non-aeronautical activities.

The ACCC compared opposing arguments of Kahn, and Crew and Kleindorfer, on this point:

> Professor Kahn argues that the apparently high returns accruing to airport operators from retail services is related to the locational advantage of the airport. Implicit in this argument is the point that SACL's monopoly market power does not extend beyond those services defined as aeronautical. By contrast, Professors Crew and Kleindorfer explicitly state that SACL's proposal 'develops a multi-till approach to price regulation, but this proposed approach leads to a number of problems, not least of which is that it allows non-aeronautical services to be priced at monopoly levels'.
>
> For the reasons outlined above, the Commission [ACCC] agrees with Professor Kahn that the dual till is in general a superior approach to aeronautical pricing, provided the services defined as aeronautical include all those in which the airport operator has significant market power. (sub 36, p. 74)

Nonetheless, as Kahn (2001) points out, in principle, infra-marginal locational rents could be extracted without affecting efficient provision of non-aeronautical services. This raises the question whether appropriation of locational rents earned on airport land in order to push down prices for aeronautical activities is likely to improve economic efficiency. In also raises the question whether, in practice, a single till is likely to effect such a transfer in a non-distorting way.

Several issues are relevant:

- If provision of aeronautical services involves economies of scale such that average costs exceed marginal costs, the break-even price will exceed the first-best level for efficient use of the airport (where price equals marginal cost). An appropriate subsidy could achieve efficient pricing but the deadweight costs of raising the tax to pay for the subsidy (essentially the disincentive effects of taxation) must be weighed against the efficiency gain in aeronautical services.
- In theory, economic or locational rent can be 'taxed' without distorting behaviour (a non-distorting, 'lump-sum' tax). In practice, single-till arrangements are applied in a way that distorts incentives to earn locational rents. If airport operators know *ex ante* that they will not retain additional locational rents earned in non-aeronautical activities (eg because rents earned above an allowed rate of return are transferred to reduce aeronautical prices), they are unlikely to expend a great deal of effort allocating available airport land to its highest-valued use. They might charge low rentals to existing concessionaires who would then capture the locational rents (or, by offering low rentals, encourage rent-seeking by prospective tenants which would dissipate at least some of the rents). Or they might allow costs of supplying non-aeronautical services to rise in order to disguise profits.
- It would be feasible to devise a system whereby rents were shared with aeronautical users and which did not distort the airport operator's incentive to

earn additional rents. However, this would need to be agreed upon and not altered unilaterally by the regulator if, for example, rents increased. Under the UK single-till model, airport operators have some incentives to earn additional locational rents within the five-year price-cap period, but they also know that any additional profits in the current regulatory period may affect the setting of price caps in future periods. Importantly, as discussed below, buyers of airport leases at core-regulated airports paid up-front for 'commercial opportunities' and thus in a sense have paid a once-off tax on rent. Alternatively, prospective buyers could have made bids on the basis of paying annual lease payments or royalties to the Commonwealth.

- A single till appropriates rents earned from non-aeronautical activities located on airport land. This could create an incentive for airport operators effectively to 'shrink' the airport boundaries, capitalising non-aeronautical operations, locating commercial activities off-airport or engaging in activities that yielded locational rents but which were not related to airport activities (eg business parks). As noted above, to the extent that any locational rents are forgone (that is, not earned), this would represent an efficiency loss. A similar distortion may have been created if the draft ACCC proposal (ACCC 2001h) to offset roughly $20 million of (mainly) annual car-parking revenue at Sydney Airport against aeronautical charges had been implemented. In this instance, the locational rent accruing to the airport from one activity (car parking) would have fallen, possibly creating an incentive for the airport to develop other activities on land that might otherwise have been used, more efficiently, for car parking.[6]
- Some rents may reflect an airport operator's entrepreneurial rather than locational advantage. Appropriation of rents from this source could encourage these operators to move to activities where rents were not taxed as heavily.[7]
- Reducing aeronautical charges will promote efficiency only if stand-alone aeronautical prices exceed marginal cost. As discussed above, it is feasible that an airport, internalising complementary demands for non-aeronautical services, voluntarily sets aeronautical prices close (or at least closer) to marginal cost. Airports may also charge in such a way that marginal consumers are not deterred from using the facility (some form of discriminatory pricing). In both cases, the efficiency argument for single-till pricing is weakened.
- Alternatively, marginal costs may exceed average costs, for example, due to congestion or decreasing returns to scale. If an airport is already experiencing

6 This assumes that the marginal locational rent flowing from car parking is not inflated by any market power in that activity — that is, it does not exceed the marginal rent forgone from not using the land in the next-best, alternative (competitive) use.

7 Economy-wide, rents are taxed via capital gains and income taxes. The single till, in the limit, imposes a 100 per cent tax on rents.

excess demand (that is, charges are below market-clearing levels), as noted by Kahn (2001), lower aeronautical prices largely will redistribute profits from airports to airlines: fares will not fall (for there will be no incentive for airlines to lower them) so airline profits will rise.[8] With prices below market-clearing levels, limited capacity will have to be rationed by a non-price mechanism which, inevitably, will incur efficiency costs.[9]

- In effect, single-till regulation can impose incentives similar to cost-based regulation on non-aeronautical activities. One possible result is that — as for most cost-based regulation — airports will have an incentive to inflate the costs of non-aeronautical activities in order to reduce measured profits. This response could involve considerable losses of productive efficiency. It also could lead to a perverse situation where aeronautical activities effectively subsidised inefficient expansion of non-aeronautical activities, for example, if airports undertook inefficient investment in retail facilities in order to increase costs and reduce non-aeronautical returns on assets (Starkie and Yarrow 2000).
- In the case of privatised, core-regulated Australian airports, an additional complication would arise from introduction of a single till. These airports appear to have paid for the rights to exploit commercial opportunities on airport land (as the result of a competitive bidding process) and the land-owner (the Commonwealth Government) largely has captured expected (infra-marginal) locational rents already.[10] In this sense, some or all of the locational rents earned by airports are not pure profits. If these rents were redistributed to airlines and/or their customers, airports would be likely to suffer large capital losses. Changing the rules would also raise concerns about sovereign risk for future investors in airports and possibly other regulated activities.

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8 The ACCC appears to reject this argument, at least in relation to Sydney Airport, on the basis that there is scope for inter-airline competition (sub. 36). While this potential exists, at peak times, when slots are fully allocated, airlines are unlikely to initiate a discount war for peak traffic, especially as scope for a more efficient airline to increase market share is limited by the slot allocation scheme (a more efficient airline (officially) cannot buy extra slots). Therefore, airlines are more likely to retain the slot 'quota rents' and not to hand them over to passengers (travelling to and from Sydney at peak times) by competing on price amongst each other for additional customers who, without an additional slot, they cannot carry. It is possible, however, that the airlines use these scarcity rents to contribute to the fixed costs of providing services on other routes.

9 Even in the (unlikely) event that a non-price rationing scheme allocates capacity to those who value it most highly, administration of the scheme will not be costless.

10 This raises the question whether it might be more appropriate for the Commonwealth Government to use airport lease sale proceeds to subsidise aeronautical activities, if such subsidisation were considered efficient. Indeed, it could be argued that the Government did this to some extent by selling core-regulated airports subject to five-year price caps that largely maintained single-till aeronautical prices.

In summary, where the airport has little or no market power in the provision of non-aeronautical services, there may be a case to appropriate airport locational rents in order to push the price of aeronautical activities closer to marginal cost. However, in practice, it is highly unlikely that the single-till 'taxation' of airport locational rents will be non-distorting. The efficiency losses involved could be much larger than efficiency gains from lower aeronautical prices because of the incentives created for the airport not to earn locational rents (and therefore not to allocate airport land appropriately), to dissipate such rents in higher costs, or to encourage dissipation of rents by prospective tenants competing for them.

Nonetheless, a dual till, that regulates only those aeronautical services in which an airport is most likely to have market power, is not without problems, particularly in its implementation. A dual till requires the regulatory basket to be clearly and comprehensively defined (chapters 8 and 9 discusses some issues arising from the definition of current price caps) and, if prices under a price cap reflect airport costs, common costs must be allocated between regulated and unregulated activities. Under a dual till, an airport also has a strong incentive to restrict competition from off-airport providers (eg by restricting access to the airport or by extending the airport's boundaries by regulation).[11]

A dual till also has the potential to discourage investment in aeronautical services in favour of non-aeronautical services if allowable returns in the former are constrained relative to returns in the latter. At the same time, however, an airport operator may have an incentive to expand aeronautical capacity to increase passenger throughput and, consequently, rents from commercial activities. This will tend to offset under-investment in aeronautical facilities.

[11] The airport could also buy up surrounding land, but presumably it will have to compete with other buyers and pay a competitive price.

D Characteristics of demand and competition at core-regulated airports

This appendix summarises the main demand and competition characteristics of the core-regulated airports. These are used in the analysis of the extent of market power held by particular airports in providing domestic passenger services (chapter 5).

In the tables that follow, 'annual passenger movements' and 'proportion of passenger movements that is international' are for 1999-00 and taken from DoTRS (unpublished data). The 'proportion of revenue that is non-aeronautical' is taken from ACCC (2001a, b, c). As noted in chapter 2, non-aeronautical revenue covers a range of services, not all of which are provided at all core-regulated airports (eg business parks). This may contribute to some of the variation in the proportion of non-aeronautical revenue across airports. Main market segments generally refer to interstate overnight visitors to the city, region or state (not the airport) (where it refers to domestic — interstate and intrastate — visitors, this is stated). Unless otherwise stated, these data, as well as data on modal substitution possibilities, are for 1999 and taken from BTR (2000b).

Table D.1 **Demand and competition characteristics of Adelaide Airport**

Annual passenger movements	: 4 201 038
Proportion of passenger movements that is international	: 6%
Proportion of revenue that is non-aeronautical	: 80%
Main market segments (percentage of interstate overnight visitors in 1999)	: For South Australia as a whole, business (31%) and visiting friends and relatives (VFR — 31%).
Destination substitution possibilities	: Relatively low, given the dominance of business and VFR travellers.
Modal substitution possibilities	: Low for business travellers. For VFR and holiday travellers, some modal substitutes appear viable, particularly for visitors from Victoria. Almost half of all interstate overnight arrivals to South Australia arrived by private vehicle in 1999. Train services also are available.
Airport substitution possibilities	: Low as there are no proximate regular public transport (RPT) airports.

Table D.2 Demand and competition characteristics of Alice Springs Airport

Annual passenger movements	: 780 825
Proportion of passenger movements that is international	: 0%
Proportion of revenue that is non-aeronautical	: 61%
Main market segments (percentage of interstate overnight visitors in 1999)	: Holiday/leisure (55% to the Northern Territory as a whole). Of all travellers (including interstate and international) to the 'Centre' region, 77% went for holiday/leisure purposes in 1999-00 (NTTC 2000).
Destination substitution possibilities	: High since Alice Springs competes with other tourist destinations.
Modal substitution possibilities	: Moderate. More than half the interstate visitors to the Northern Territory arrive by air, but a significant proportion (over 40% in 1999–00) travel by other modes.
Airport substitution possibilities	: High. Yulara (Ayers Rock) Airport provides a viable alternative to Alice Springs, especially for tourists who travel to areas such as Uluru.

Table D.3 Demand and competition characteristics of Brisbane Airport

Annual passenger movements	: 10 532 391
Proportion of passenger movements that is international	: 23%
Proportion of revenue that is non-aeronautical	: 72%
Main market segments (percentage of domestic overnight visitors in 1999)	: Business (32%) and VFR (32%) (Tourism Queensland 2000a).
Destination substitution possibilities	: Relatively low, given the dominance of business and VFR travellers.
Modal substitution possibilities	: Low for business traffic. However, for VFR and holiday travellers, modal substitutes — particularly private vehicle — may be viable (about 45% of interstate visitors to Queensland arrived by modes other than air in 1999).
Airport substitution possibilities	: Low. Although there are relatively proximate airports in Coolangatta (and Maroochydore), they do not appear to provide significant competition due to the scale of Brisbane, the extent of its business traffic, and its much stronger ability to service international traffic.

Table D.4 **Demand and competition characteristics of Canberra Airport**

Annual passenger movements	: 1 969 221
Proportion of passenger movements that is international	: 0%
Proportion of revenue that is non-aeronautical	: 59%
Main market segments (percentage of interstate overnight visitors in 1999)	: Business (30%) and VFR (34%).
Destination substitution possibilities	: Relatively low, given the dominance of business and VFR travellers.
Modal substitution possibilities	: High. Despite the high proportion of business and VFR visitors, a significant proportion of arrivals (71% in 1999) go to Canberra by car. This may reflect the fact that, on the Sydney–Canberra route, total travel times by air and car are similar.
Airport substitution possibilities	: Low as there are no proximate RPT airports.

Table D.5 **Demand and competition characteristics of Coolangatta Airport**

Annual passenger movements	: 1 959 017
Proportion of passenger movements that is international	: 1%
Proportion of revenue that is non-aeronautical	: 45%
Main market segments (percentage of domestic overnight visitors in 1999)	: Holiday/leisure (62%) (Tourism Queensland 2000b).
Destination substitution possibilities	: High. The Gold Coast competes with other tourist destinations.
Modal substitution possibilities	: Moderate/High. Many domestic visitors to the Gold Coast arrive in private vehicles (69% in 1999 (Tourism Queensland 2000b) although this figure includes intrastate visitors so it would tend to overstate the proportion of interstate visitors who drive).
Airport substitution possibilities	: High as Brisbane Airport appears to be a viable alternative to Coolangatta for visitors to the Gold Coast.

Table D.6 **Demand and competition characteristics of Darwin Airport**

Annual passenger movements	: 1 080 229
Proportion of passenger movements that is international	: 14%
Proportion of revenue that is non-aeronautical	: 54%
Main market segments (percentage of interstate overnight visitors in 1999)	: Holiday/leisure (55% of interstate overnight visitors to the Northern Territory as a whole). Of all visitors (including interstate and international) to the 'Top End' region of the Northern Territory, 55% went for holiday/leisure purposes in 1999-00 (NTTC 2000).
Destination substitution possibilities	: High. Although the proportion of business travellers to the 'Top End' is higher than for the rest of the Territory, most travellers go for a holiday. Therefore, Darwin and surrounding areas compete with other tourist destinations, including other areas in the Territory.
Modal substitution possibilities	: Low for business travellers and other travellers visiting Darwin only, given the relative isolation of Darwin. For holiday travellers who visit several regions in the Territory, the potential for modal substitution appears to be more significant (over 40% of interstate visitors to the Territory arrived by modes other than air in 1999-00 (NTTC 2000)).
Airport substitution possibilities	: Vary by market segment. Low for those visiting only the 'Top End'. May be higher for those visiting several areas within the Territory, but still likely to be low overall.

Table D.7 **Demand and competition characteristics of Hobart Airport**

Annual passenger movements	: 908 647
Proportion of passenger movements that is international	: 0%
Proportion of revenue that is non-aeronautical	: 67%
Main market segments (percentage of interstate overnight visitors in 2000)	: Holiday/leisure (56% to Tasmania as a whole (Tourism Tasmania (2001)).
Destination substitution possibilities	: High. Hobart (and Tasmania generally) compete with other tourist destinations.
Modal substitution possibilities	: Moderate. Sea, used by 22% of arrivals to Tasmania in 2000 (Tourism Tasmania 2001), is a viable alternative for holiday (and VFR) visitors.
Airport substitution possibilities	: High. Launceston Airport in particular appears to provide (potential and actual) competition. The high proportion of tourists who visit more than one area in the State increases the potential competition between airports.

Table D.8 **Demand and competition characteristics of Launceston Airport**

Annual passenger movements	: 542 091
Proportion of passenger movements that is international	: 0%
Proportion of revenue that is non-aeronautical	: 66%
Main market segments (percentage of interstate overnight visitors in 2000)	: Holiday/leisure (56% to Tasmania as a whole (Tourism Tasmania (2001)).
Destination substitution possibilities	: High. Launceston (and Tasmania) compete with other tourist destinations.
Modal substitution possibilities	: Moderate. Sea (used by 22% of arrivals to Tasmania in 2000 (Tourism Tasmania 2001)), is a viable alternative for holiday (and VFR) visitors.
Airport substitution possibilities	: High as there are a number of airports in relatively close proximity to Launceston. Hobart Airport in particular appears to provide (potential and actual) competition. The high proportion of tourists who visit more than one area in the State increases the potential competition between airports.

Table D.9 **Demand and competition characteristics of Melbourne Airport**

Annual passenger movements	: 15 138 100
Proportion of passenger movements that is international	: 19%
Proportion of revenue that is non-aeronautical	: 67%
Main market segments (percentage of interstate overnight visitors in 1999)	: For Victoria as a whole, business (34%) and VFR (30%).
Destination substitution possibilities	: Relatively low, given the dominance of business and VFR travellers.
Modal substitution possibilities	: Low for business traffic. However, for VFR and holiday travellers, modal substitutes — particularly private vehicle — appear to be viable for visitors from some areas, including South Australia and New South Wales. About 49% of interstate overnight travellers arrived in Victoria by air in 1999.
Airport substitution possibilities	: Low as there are no proximate RPT airports. Although Essendon Airport, for example, is physically capable of handling B737 traffic, there are administrative problems in doing so.

Table D.10 **Demand and competition characteristics of Perth Airport**

Annual passenger movements	: 4 890 304
Proportion of passenger movements that is international	: 31%
Proportion of revenue that is non-aeronautical	: 71%
Main market segments (percentage of interstate overnight visitors in 1999)	: For Western Australia as a whole, business (40%) and VFR (26%).
Destination substitution possibilities	: Relatively low, given the dominance of business and VFR travellers.
Modal substitution possibilities	: Low given the isolation of Perth. Of interstate overnight arrivals to Western Australia in 1999, 82% arrived by plane.
Airport substitution possibilities	: Low as there are no proximate RPT airports.

Table D.11 **Demand and competition characteristics of Sydney Airport**

Annual passenger movements	: 23 097 249
Proportion of passenger movements that is international	: 33%
Proportion of revenue that is non-aeronautical	: 62%
Main market segments (percentage of domestic overnight visitors in 1999-00)	: Business (33%) and VFR (34%) (Tourism New South Wales 2001).
Destination substitution possibilities	: Relatively low, given the dominance of business and VFR travellers.
Modal substitution possibilities	: Relatively low for business traffic (except for the Sydney–Canberra route). However, for VFR and holiday travellers, modal substitutes — particularly private vehicle — appear to be viable for visitors from some areas, including the ACT, Queensland and Victoria.
Airport substitution possibilities	: Low as there are no proximate RPT airports.

Table D.12 **Demand and competition characteristics of Townsville Airport**

Annual passenger movements	: 681 638
Proportion of passenger movements that is international	: 0%
Proportion of revenue that is non-aeronautical	: 62%
Main market segments (percentage of domestic overnight visitors in 1999)	: Holiday/leisure (53% of visitors to Tropical North Queensland (Tourism Queensland 2000d)).
Destination substitution possibilities	: High. Townsville competes with other tourist destinations, both in Tropical North Queensland and elsewhere.
Modal substitution possibilities	: Relatively low for business traffic. For VFR and holiday travellers, the potential to use other modes exists. However, this option does not appear to be as attractive as for other areas in Queensland (43% of domestic visitors to Tropical North Queensland arrived by air in 1999 (Tourism Queensland 2000d)).
Airport substitution possibilities	: Low as there are no proximate RPT airports.

E Fuel throughput levies and taxi charges

The introduction of fuel throughput levies and taxi charges by some airport operators has generated considerable debate. This appendix describes the background to these charges, discusses their treatment under current price regulation, and highlights issues for future regulation.

E.1 Fuel throughput levy

Aircraft refuelling services provided by airport operators at core-regulated airports are subject to price monitoring by the ACCC under the *Prices Surveillance Act 1983* (PS Act) (chapter 3). They currently are not subject to price-cap arrangements, nor were they subject to prices surveillance (notification) prior to privatisation.

Under current monitoring arrangements, Brisbane Airport Corporation (BAC) and Westralia Airports Corporation (WAC) introduced a new charge on oil companies for aircraft refuelling services — a fuel throughput levy. Objections to the imposition of this levy from oil companies and airlines led to a review by the ACCC, but a decision on the issue has yet to be announced by the Commonwealth Government.

Background

Refuelling facilities at Brisbane and Perth (international) airports are known as Joint User Hydrant Installations (JUHIs). They consist of a fuel storage facility, a hydrant refuelling site and connecting pipelines. These were established, and are owned, by joint ventures comprising several oil companies.

Airport operators charge the oil companies for use of the land by way of licence fees and rents payable pursuant to the leases under which the oil companies occupy the refuelling sites. This charge for aircraft refuelling services, when imposed by the Federal Airports Corporation (FAC), was not subject to prices surveillance. Since the sale of leases for Phase 1 and 2 airports, and the lease of Sydney Kingsford

Smith Airport (Sydney Airport) to Sydney Airports Corporation Ltd, this charge has been subject to price monitoring by the ACCC.

According to BP (sub. to ACCC 1998b), in 1995 the FAC mooted the concept of a fuel throughput levy during negotiations with the oil companies to establish a standard licence for JUHIs. The oil companies strongly resisted the inclusion of a fuel throughput levy in a standard licence. Negotiations stalled until 1997 when the oil companies signed the licences (to continue for 15 years), with the inclusion. The FAC, however, did not activate the fuel throughput levy provision, although it had the power to do so. Oil companies continued to pay, on a $ per square metre basis, for lease of the land.

On privatisation, airport operators succeeded to the FAC's rights and obligations under the licence (*Airports (Transitional) Act 1996*), acquiring the right to impose the fuel throughput levy.

In 1997, BAC informed Shell of its intention to impose a new charge for aircraft refuelling services — a fuel throughput levy of 0.4 cents per litre on all fuels supplied, distributed or transferred through the combined main/short pipeline at Brisbane Airport. Shell objected. The dispute was referred to an 'independent expert', in accordance with licence provisions, who subsequently confirmed that 'BAC had a legal right to charge the levy and the level of 0.4 cents per litre was reasonable in terms of BAC's contractual rights' (ACCC 1998b, pp. 16–17). In July 1998, BAC introduced the levy.

WAC introduced a fuel throughput levy of 0.5 cents per litre on refuelling operations at the Perth Airport international terminal from June 1999.

The revenue raised by the BAC and WAC fuel throughput levies, in 1999-00, was $2.5 million and $727 000, respectively (ACCC 2001b, d). The revenue is in addition to revenue obtained from the existing lease charges.

Many airports in other countries charge for refuelling services on a volume of fuel throughput basis, for example, Amsterdam, Kuala Lumpur, Los Angeles, Manchester and Aberdeen, and Auckland and Wellington airports in New Zealand. Wellington Airport moved in a different direction to BAC and WAC, renegotiating its most recent contract with oil companies to introduce a fixed rent charge and to reduce the existing fuel throughput charge. In Australia, since the late 1980s, Cairns Airport (not subject to price regulation), has charged for refuelling services in two parts: a lease charge, and a licence agreement based on a sliding scale volume of fuel uplifted.

The ACCC review

In undertaking its monitoring role, and in response to concerns by oil companies and airlines, the ACCC undertook a public review of fuel throughput levies (ACCC 1998b). In undertaking its review, the ACCC paid particular regard to section 17(3)(b) of the PS Act:

> (b) the need to discourage a person who is in a position substantially to influence a market for goods or services from taking advantage of that power in setting prices.

The ACCC also took account of the Treasurer's press release on price monitoring which stated:

> Price monitoring will allow the ACCC to collect data where the airport operator may have scope to exercise market power but where coverage of the services under the more formal price cap arrangements is not considered warranted. Any abuses of market power detected through the prices monitoring arrangements will be the trigger for consideration of stricter forms of prices oversight. (Costello 1998)

The ACCC summarised its approach as follows:

> For the purposes of this report 'market power' refers to circumstances in which a person is in a position to substantially influence a market for goods and services. An 'abuse of market power' occurs where the person takes advantage of that power in setting prices. (ACCC 1998b, p. 14)

Based on this approach, the ACCC (1998b) addressed four issues:

- the extent of increases in the price of refuelling services and airport profits as a result of increases in refuelling charges;
- whether fuel throughput levies could be justified through increases in costs and/or offsetting reductions in other charges;
- whether the fuel throughput levy is an abuse of market power; and
- whether the fuel throughput levy should trigger a stricter form of prices oversight, and the form that should take.

On consideration of information provided by BAC and WAC, and submissions from interested parties, the ACCC formulated its conclusions and recommended that refuelling services, and therefore both lease payments and fuel throughput levies, be included under the price-cap arrangements (box E.1). This means that if revenue were to be pressing up against the CPI-X limit, revenue from aircraft refuelling would need to be balanced by reductions in other revenue.

The ACCC reported to the Treasurer and publicly released its report in December 1998. The ACCC reconfirmed its approach this year, suggesting that refuelling services be subject to a price cap (sub. 36). Moreover, in its draft decision on

aeronautical pricing at Sydney Airport, the ACCC decided that 'above normal' returns from aeronautical-related services, such as fuel throughput levies and car parking, should be taken into account in pricing aeronautical services. Specifically, these returns were to be subtracted from aeronautical revenue to generate a total allowable revenue from aeronautical services for the airport (ACCC 2001h). Following a Direction (No. 22) in April 2001 from the Minister for Financial Services and Regulation, the ACCC moved away from this position in the final decision (ACCC 2001i).

Box E.1 **ACCC report on fuel throughput levies**

The ACCC (1998b) report on the introduction of fuel throughput levies by BAC and WAC concluded and recommended the following:

> Introduction of fuel throughput levies will significantly increase the price of refuelling services at airports where they are introduced. (p. 5)
>
> The validity of the contractual arrangements is separate from the issue of the relationship of fuel throughput levies to costs or reductions in charges elsewhere, and as such is not directly relevant to the Commission's monitoring role … (p. 30)
>
> The introduction of a fuel throughput levy at Brisbane and Perth airports is likely to result in some or all of that levy being passed on to the airlines refuelling at those ports. (p. 5)
>
> A logical outcome … is higher charges to passengers on at least some airline services to that destination. (p. 25)
>
> … the fuel throughput levies introduced by BAC and proposed by WAC are not justified in terms of increases in costs or through offsetting reductions in other charges. (p. 6)
>
> There is a strong case that large airports have market power in the market for refuelling services. (p. 7)
>
> There is a strong case that by introducing fuel throughput levies airport operators have taken advantage of market power that they have in the provision of aircraft refuelling services. (p. 7)
>
> The Commission recommends that stricter forms of prices oversight should be considered in relation to aircraft refuelling services. (p. 8)
>
> The Commission recommends that refuelling services are included within a CPI-X price cap. (p. 11)

Source: ACCC (1998b).

To date, the Commonwealth Government has not announced a decision on this issue. Both BAC and WAC continue to impose a fuel throughput levy, which remains outside the price cap.

Divergent views

Submissions to the ACCC, and more recently, to this inquiry, have highlighted the contentious nature of the fuel throughput levy. Airport operators contended, in essence, that they should be allowed to introduce a fuel throughput levy, and that it should not be included under price-cap arrangements.

Oil companies, on the other hand, argued that the fuel throughput levy should not have been introduced by BAC and WAC, that its imposition represents an abuse of market power and cannot be justified, and therefore, that the levy be subject to stricter prices oversight. The airlines, concerned that costs would be passed through to them, in general supported this view.

Airport investors (MTAA Superannuation Fund, Hastings Funds Management and the Australian Council for Infrastructure Development) did not make submissions to the ACCC review of fuel throughput levies. However, they expressed their disagreement with the ACCC's conclusions and recommendations to this inquiry.

E.2 Taxi charges

Price-cap arrangements apply to the provision of aeronautical services, being limited to: aircraft movement facilities and activities, and passenger processing facilities and activities. The latter includes 'landside roads, landside lighting and covered walkways' (chapter 3).

Several airport operators have introduced airport vehicle access charges for taxis. In 1998, BAC introduced a fee for taxis of $1 per passenger pick up at Brisbane Airport. WAC also introduced a fee for taxis in 1998 — $1 per pick up at Perth Airport (unbooked) and $2 per pick up (booked). The following year Capital Airport Group introduced a taxi charge of $2 at Canberra Airport.[1] Taxi charges were recently introduced at Melbourne Airport — a $0.66 charge per taxi for passenger pick up (passengers are charged $1, 66 cents of which is revenue to the airport operator, and 34 cents commission for handling to the taxi).[2]

The introduction of these charges has been particularly contentious. The airport operators argued that taxi charges did not relate to the use of 'landside roads', were not within the definition of 'aeronautical services', and therefore revenue derived

1 Northern Territory Airports introduced taxi charges at Darwin and Alice Springs airports in 1998, but removed them the following year.

2 A $2 per vehicle pre-booked taxi fee applies to passengers departing in a taxi from the Premium Parking area.

from taxi charges had not (and should not be) included within the price cap. Hastings Funds Management (part-owner of several airports) noted:

> We have consistently maintained that charges for ground transport are in fact not charges to access the land-side roads (as would be the case, for example if a toll was placed on the road), but a concession fee for the right to conduct business by taxi and bus operators. (sub. 19, p. 14)

The ACCC, on the other hand, considered that revenues derived from taxi charges were covered under the definition of 'aeronautical services' (being included in 'landside roads') and therefore were included in the price cap (ACCC 1999e, f; 2000d). The ACCC treated these as 'new' charges under Direction No. 20, pursuant to the PS Act, which stated that 'charges on new or varied services are to be factored into the price-cap arrangements if the services are declared services'.[3]

The ACCC therefore requested that BAC, WAC and Capital Airport Group formally 'notify' the ACCC of their proposals to introduce a taxi charge — which they did, albeit on a 'without prejudice' basis. This inclusion has contributed to BAC and WAC not complying with the price cap — revenue has been 'over-recovered' and will have to be passed back to users within a specified time period.

Canberra Airport instigated an action in the Federal Court against the ACCC in an attempt to have the ACCC's decision on taxi charges overturned. In March 2001, the Federal Court ruled, in a 'line-ball' decision, in favour of the ACCC — that the charge was within the price cap because it related to the use of landside roads. The Court stated:

> … it is submitted for the applicant [Canberra Airport] that, on the facts, the area in question is properly described as a car park or marshalling yard and is simply not an access way for through traffic.
>
> The primary submission on behalf of the respondent [ACCC], in summary, is that the area is physically an extension of the main road …
>
> The issue is finely balanced, with each argument capable of acceptance. My mind has fluctuated as to the correct result. In the end I am persuaded that the area is best seen as part of the overall road system of the Airport in a way which, for example, car parks are not. (Federal Court of Australia 2001)

Capital Airport Group has since lodged an appeal with the full Federal Court.

APAM (Melbourne Airport) is the only airport operator to seek ACCC consideration of the taxi charge under necessary new investment (NNI) provisions of the price-cap arrangements (chapters 3 and 8). However, in so doing, APAM noted that it considered that the charge should be subject to price monitoring, not

3 Hockey, Minister for Financial Services and Regulation, October 2000.

declaration under the price cap, and that because of different circumstances, the Federal Court decision regarding Canberra Airport would shed little light on the Melbourne Airport situation (Melbourne Airport 2001).

APAM sought approval under NNI provisions to introduce a $1.40 taxi charge to recover costs associated with development of a taxi facility, including unrecovered road costs, taxi car parking development costs and taxi rank labour costs. The Victorian Taxi Association, representing the taxi industry, disagreed with the imposition of the charge, commenting that taxi passengers would not receive any service improvement, that the charge was an unfair tax, and that the timing of its introduction was poor. The Association also noted that it was concerned about the imposition of taxi charges in principle — that taxi operators may not be allowed to pass on charges to passengers without delay, and that charges may affect the demand for taxi services (sub. to ACCC 2001a; sub. 4 to this inquiry). The Transport Workers Union, representing a smaller but increasing number of taxi drivers, noted that taxi drivers (content with existing facilities) saw no need to introduce new taxi facilities and therefore objected to the charge (sub. to ACCC 2001a).

The ACCC considered the proposed taxi charge according to criteria for NNI set out in the Department of Transport and Regional Development Pricing Policy Paper (1996) and replicated in Direction No. 20 pursuant to the PS Act (chapter 3). It found that some of the costs met the criteria and therefore could be 'passed-through' the price cap — specifically, that $0.66 (GST inclusive) of the proposed $1.40 charge would not be subject to the price cap (ACCC 2001a). Following this decision, APAM introduced a $0.66 taxi charge, as noted above.

E.3 Issues arising from current regulation

The debate regarding fuel throughput levies and taxi charges raises some important issues with respect to current and future regulatory arrangements.

These debates highlight a problem intrinsic to a dual-till system — that given there must be two baskets of services (those subject to a price cap, and those not) there is likely to be contention, at least for some services, regarding:

- which services *are* within the price cap and which are not (illustrated by the taxi charges debate); and
- which services *should be* within the price cap and which should not (illustrated by the fuel throughput levy and taxi charges debates). The fuel throughput levy debate highlights that, at least for some airport operators and some services,

whether or not the potential for abuse of market power exists (and is abused) can be a contentious issue.

Similarly, there may also be disagreement regarding whether services not within the price cap are, or should be, subject to price monitoring or to no price regulation.

The taxi charges debate highlights the importance of clarity and precision in legislation defining the basket of services to be subject to the price cap. The scope for different interpretations of particular legislative clauses cannot be eliminated, but it can be minimised in the drafting process. Moreover, shortcomings in the legislation can be addressed by appropriate amendment as they arise.

The lack of clarity about what services relate to 'landside roads' has created uncertainty among airport operators and users. As with fuel throughput levies, the uncertainty has been exacerbated by the length of time that these issues remain unresolved and the apparent difference between the ACCC interpretation and the Commonwealth Government's intent on these issues. Uncertainty (factored into risk assessment) affects the ability of airport operators to plan and hence affects investment decisions — both of those currently in the business and of potential investors considering the purchase of airport leases in the future.

In relation to fuel throughput levies, airport operators claim to have assessed the risks and made commercial decisions (bidding for airport leases) based, in part, on their perception of Commonwealth Government policy at time of sale of leases — that refuelling services were outside the price cap.

Several airport operators commented on what they perceived to be Commonwealth Government policy prior to, and after the sale of leases. APAM, BAC, WAC and Australian Airports (Townsville) put the view that they had a contractual right to impose a fuel throughput levy because of a pre-existing FAC (a Commonwealth Government agency) contract with the oil companies (subs 7, 8, 21; trans., p. 16).

BAC noted other Commonwealth Government representations:

> … the Commonwealth Government's Office of Asset Sales confirmed to airport bidders during the privatisation process they would be contractually entitled to introduce a fuel throughput fee … (sub. 8, p. 38)

Airport operators were of the view that, when exercising this contractual right, charges (including fuel throughput levies) for aircraft refuelling services would not be subject to a price cap. As noted above, when the FAC operated airports, charges for the provision of refuelling services were not subject to price regulation. Moreover, airport operators (APAM, BAC, WAC; subs 7, 8, 21) added that representations by the Commonwealth Government to prospective bidders for the

leases of Phase 1 and 2 airports did nothing to dispel their view that fuel throughput levies could be implemented outside the price cap. APAM commented:

> In relation to fuel throughput levies, it is our view that in the information memorandum to bidders the Commonwealth did represent that that was a source of revenues available to them that would not be within the cap. (trans., p. 169)

As a consequence, bidders factored projected revenue from fuel throughput levies into their bid prices for the leases. WAC noted:

> The bidders for PIA [Perth International Airport] factored new revenue from the fuel levy into their bid, on the basis that pre-existing contracts allowing for the fuel levy had been entered into by the FAC and agreed with fuel companies prior to the airport sale. Moreover, the opportunity to implement the fuel levy was specifically referenced by the Commonwealth Government in the Information Memorandum.
>
> Accordingly, airports which acquired the benefits of these contracts, have merely exercised their rights to charge the fee. (sub. 21, p. 21)
>
> If the Government did not want WAC, or other bidding groups, to impose such a fee, it should have made [it] perfectly clear prior to January 1997 … (sub. to ACCC 1998b, p. 3)

The Productivity Commission is not aware of any public statements by the Commonwealth Government (information memoranda to bidders were confidential) specifically identifying services to be included or excluded from the price cap prior to successful bidders for Phase 1 airports being announced in May 1997. In June of that year the Commonwealth Government publicly made its intentions clear regarding refuelling services — that they would not be subject to the price cap. The Treasurer stated that refuelling services would be subject to price monitoring (Costello 1997). This public information was therefore available to bidders for Phase 2 airports, although the policy was not formalised until May 1998, by Declarations (83 and 84) pursuant to the PS Act — after the successful Phase 2 airport bidders had been announced.

Phase 1 airport bidders may not have been clear about the implications of the formal monitoring process. Although the Department of Transport and Regional Development Pricing Policy Paper (DoTRD 1996), distributed to prospective bidders for Phase 1 airports, noted that there would be monitoring of selected aeronautical-related services, it did not specify the services and did not make mention of the power of the ACCC to recommend that particular aeronautical-related services be transferred to within the price cap. It was not until June 1997, after finalisation of the bids, that the Treasurer publicly announced that there was the potential for stricter prices oversight (Costello 1997).

In relation to taxi charges, airport operators (eg Australian Airports (Townsville), APAM, BAC, and WAC (trans., p. 17; subs 7, 8, 21) and Hastings Funds

Management (sub. 19) stated that Commonwealth Government advice during the bidding stage for airports, and since (for example, information memoranda), was that revenue from vehicle access charges was to be collected outside the price cap.

In summary, with respect to these two charges, considerable uncertainty has ensued. This seems to stem from differences in interpretation, a lack of clarity, precision and transparency regarding the policies at, and since, the sale of leases, and time delays in formal Commonwealth Government statements. Moreover, changes in Government policy that result in direct adverse consequences for parties raise issues of sovereign risk.

F Valuation of aeronautical land

This appendix considers some issues that arise in the valuation of airport land for the purposes of regulation of aeronautical prices. Particular emphasis is placed on issues raised in the recent ACCC review of aeronautical prices at Sydney Kingsford Smith Airport (Sydney Airport) (ACCC 2001i).

Aeronautical services, particularly for large aircraft in large cities, are land intensive. Runways need to be several kilometres in length and substantial buffer zones between the airport and surrounding activities (particularly residential areas) are desirable. In addition, most airline passengers value proximity to city centres and airports often are situated on land that would be valued highly for other uses. At June 1997, the Federal Airports Corporation (FAC) valued total land in its airport network at around 30 per cent of its total (including non-aeronautical) fixed assets (FAC 1997).[1]

Because of its significance in the aeronautical asset base, the valuation of land can have a major effect on the aeronautical prices that a regulator might consider justified on the basis of recovering airport costs. In general, this has not been an issue to date for the privatised core-regulated airports because their (average) aeronautical charges have been determined by adjustments to FAC starting prices under price caps, including related new investment cost pass-throughs.[2] However, Sydney Airport is not subject to a price cap; and the ACCC examined Sydney Airports Corporation Limited's (SACL) September 2000 proposal for aeronautical price increases using a cost building block approach.

Although Sydney Airport is smaller in land area than most other major Australian airports, it is situated close to the Sydney CBD and hence the market value of its land is very high. SACL's valuation (SACL 2000) of aeronautical land averaged $115 per square metre and represents nearly 42 per cent of the aeronautical asset

1 This was the last year that the FAC operated all of the capital city airports. The FAC valued land on the basis of market value for alternate use (capped at light industrial) at 30 June 1996. Other fixed assets were valued at written-down replacement cost at 30 June 1996 plus asset additions and less asset sales and depreciation during 1996-97.

2 Where new aeronautical investment has involved use of land previously used for non-aeronautical purposes, regulatory assessment of the allowable price increase has included a return on that land.

base.[3] Participants in the ACCC's examination of SACL's price increase proposal presented a variety of options for valuing land for the purpose of price regulation. These provided a very wide range of land values and, by implication, significant variations in cost-based aeronautical prices.

In considering Sydney Airport land values the ACCC (2001i) drew attention to its earlier views (ACCC 1999c) on asset valuation in general:

> In determining an appropriate asset valuation methodology economic principles and analysis do not provide an unambiguous decision rule for the valuation of sunk assets. Rather economic principles provide lower and upper bounds — scrap value and replacement cost. Within these bounds there is opportunity for regulatory judgement. (ACCC 2000i, p. 132)

The scope for such 'regulatory judgement' appears particularly pronounced with regard to Sydney Airport land. The ACCC reduced SACL's proposed value for aeronautical land of $705 million by over one-third to $452 million. In itself, this lower land value leads to average aeronautical prices being about 8 per cent lower than otherwise.[4] Using the zero land value (for existing land) suggested by the Board of Airline Representatives of Australia (BARA 2000), and applying the ACCC's assessment of SACL's cost of capital, would have led to prices about 20 per cent lower than SACL's request.

This wide variation in land values contrasts with a number of other important elements of Sydney Airport's cost structure about which there was more agreement and in which the ACCC, in reaching its pricing decision, varied much less from SACL's proposal. For example, the ACCC accepted SACL's valuations of other assets (although it reduced allowable depreciation by nearly 25 per cent) and it reduced allowable operating and maintenance expenditure by 10 per cent.

The opportunity cost concept is the appropriate approach to land valuation for economic efficiency purposes. It assists the government in making decisions on the efficient location of the airport by signalling to users the land use costs of their air travel decisions — their willingness to pay indicating that they value the current airport site more than its next best use. Any move away from opportunity cost

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3 SACL estimated the opportunity cost of land by considering the price that a developer would pay for a similar land parcel in a similar location (after allowing for development and holding costs). It then added the land-related costs (for example, holding costs) of developing the site into an airport over 5 years. This is a new entry cost concept for valuing land.

4 In conjunction with its proposal to include land at market values, SACL also included a deduction of $14.7 million from allowable aeronautical revenue to allow for the forecast annual real capital gain on land. However, because the ACCC preferred to use indexed historical cost land values it did not take account of SACL's proposed deduction when determining allowable prices.

pricing will obscure these signals. Opportunity cost also provides the correct incentives to the airport operator regarding use of airport land.

The New Zealand Commerce Commission (CC) in its draft report on price control for major New Zealand airports, argued for opportunity cost (after excluding land held for future development) as the appropriate value of land for price regulation purposes:

> Valuing airfield land at opportunity cost provides appropriate signals to either continue operating the land in its existing use (as an airfield) or to put the land to alternative use and relocate the airport. It also provides the appropriate incentives for new investment.
>
> Opportunity cost should be determined based on the highest alternative use value of airfield land. (CC 2001b, p. xxvi)

The important question is what is the appropriate concept of opportunity cost. In the case of Sydney Airport, various measures of land value for price regulation purposes have been suggested depending on the options that are considered to be available to the airport operator and the government. Much discussion has focussed on whether Sydney Airport must continue as an airport.

F.1 Efficient land use

The Government has announced that it considers that Sydney Airport will be able to handle Sydney's air traffic growth until 2010, with a review of Sydney's airport needs to be conducted in 2005. Even when a second airport is built, it is likely that, because of its locational advantage, Kingsford Smith would be retained.

BARA (2000) argued that, in view of this, the appropriate opportunity cost valuation of Sydney Airport land was zero as there are no other uses to which it was going to be put. BARA considered that purchases of new land should be valued at their purchase price in order to provide appropriate incentives for SACL in making marginal additions to land. NECG (2000b), in a report to the ACCC, also contended that if there is no likelihood of Sydney Airport being closed then there is no opportunity cost associated with SACL land.

Pitchford (2000) argued that if the use of the current site as an airport is considered mandated by the Government, then the land's sale value is not relevant for assessing required regulatory return. He considered that for existing land, a (non-zero) valuation of land based on users' valuations of airport services was appropriate.

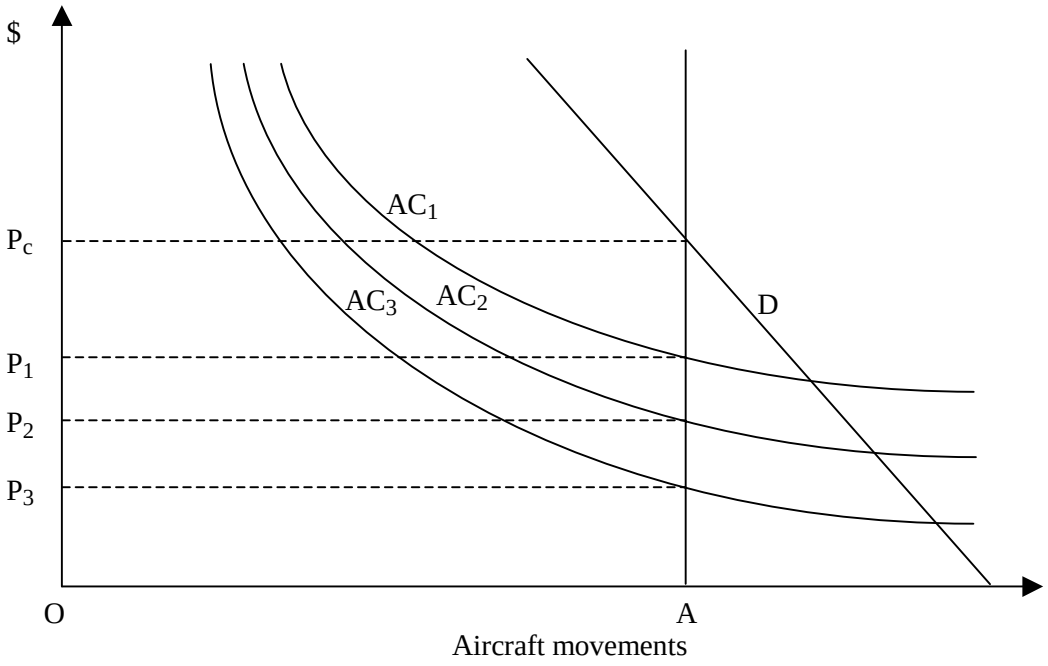
Two aspects of the appropriate valuation of airport land are now considered. One is the valuation of the site that could enter into calculations of whether an airport

should be left where it is or moved to a new site. The other is the valuation that would guide efficient use of the existing site.

Valuation of existing airport land

Figure F.1 presents a very simplified picture of the demand for airport services and the costs of providing them. For simplicity all airport services are bundled together (including leases for retailing etc) and the supply and demand for the package is related to aircraft movements. Demand is aggregated so that there are no differences in demand at different times of day or year: this is a simplification that does not affect the initial points.

Figure F.1 **Market for airport services: different valuations of airport land**



The average cost curves (AC_1, AC_2 and AC_3) are drawn for different valuations of land. For AC_1, it is assumed that the average costs incorporate the highest opportunity cost of the land — which could be redeveloping the land for residential purposes. Using existing values of neighbouring land (depressed by airport noise) gives average costs of AC_2. Using BARA's proposed opportunity cost of airport land of zero could give AC_3.

Assume that use of the airport is constrained to OA by regulation. (Assume also that capacity cannot be increased by buying more land and the airport charges a single price and has to cover its costs.) The efficient price of airport services is P_c, at

which price demand is constrained to the available supply and those who value the service at P_c or more will purchase the services. If the airport were to be sold as an airport the revenue would be the capitalised value of $OA.OP_c$ less running costs. (The valuation of consumers of the airport would be larger than this, being the area under the demand curve up to the quantity OA. This is the amount of revenue that a perfectly discriminating monopolist would be able to raise from consumers of the services.)

Now assume that price is regulated on a 'building block' cost approach: that is by adding up the production costs of the airport together with an assumed value of the land. The highest level that prices can get to under this approach is P_1.

The difference between P_c and P_1, P_2, and P_3 respectively, multiplied by the quantity OA, shows the 'economic rent' that would accrue to someone other than the airport if prices are constrained to P_1, P_2 or P_3. It is only the price P_c that shows the value of the airport to the operator or potential purchaser, in its present site; it is this value that provides an appropriate signal as to whether to sell and move elsewhere and to a government in evaluating the effects of regulation. It should be noted that environmental considerations are not taken into account here — they are a necessary factor to be addressed in making any decision regarding moving etc in practice.

If a building block approach to price regulation is taken, AC_1 provides a better guide than AC_2 or AC_3, and also imposes a smaller burden on the non-price rationing of the demand to the constrained supply: excess demand is smaller with price P_1 than P_2 or P_3. Also, the rents accruing to those other than the airport operator (or government) are smaller with P_1 than P_2 or P_3.

The analysis is made a little more complicated if the airport were to be congested only at certain times of the day. Different prices would then be appropriate at different times of the day. At congested times the price P_c is still appropriate; at other times of the day the efficient price could be one that covered marginal costs. A building block approach for price regulation may be able to calculate the marginal costs, but not the appropriate 'congestion' price P_c. Unless the price P_c were charged at congested times, there is potential for inefficient allocation of movements as between airlines at congested times and between the congested and uncongested times.

Efficient use of airport land

Now consider the appropriate land valuations to guide the use of the fixed amount of airport land by the airport operator. Initially the assumption is made that (at the

margin) land can be allocated between different uses. Allowed pricing freedom, the operator would allocate land among various activities so that they yielded the same (marginal) return on each. This would be equal to the price P_c if the output is constrained. For those services that could be provided on or off airport, only those that yield a benefit of P_c or more would be supplied on the airport. If the price is constrained below P_c then the operator would no longer have to be so selective in choosing between what was located on-site. As noted earlier, constraining prices to be below P_c may mean that some users who value airport services below P_c may obtain the services while those who value them higher than P_c may be excluded. So it may be that some services that are valued (at the margin) below P_c are provided on-site, instead of those that are valued at P_c or more. This potentially inefficient use of the airport site would be aggravated the lower is the regulated price.

If the regulated price were to be such that a single-till 'taxed' away from the operator all profits from some airport activities to reduce the price of others, the operator would have no incentive to allocate airport land efficiently and would have an incentive to move off-site all activities on which a higher return was possible. (If the constrained return were below P_2, there would be an incentive to sell some airport land if that were possible.)

If a dual till were to be applied, regulating prices on some activities but not others, then an efficient allocation of land between the two types of activities could only be obtained if the costs allowed in determining the regulated prices incorporated the full opportunity cost of the land. That opportunity cost would be the return available on land from producing unregulated services.

Now assume that there are constraints on allocating land at the margin between uses. In particular, assume that there are two types of land, airside and landside, and that because of the constraint on aircraft movements, there is no point in moving landside land into airside use. (It is also assumed that there is no incentive to convert airside land into landside land.) The relevant opportunity cost of land for landside activities as a whole would be the actual cost of land off the airport site. But if there were locational advantages from being on the airport site (or on parts of it) then the locational rent should be added to the offsite value in considering the relevant opportunity cost for allocating any particular land between alternative on-site uses.

F.2 The ACCC decision

The ACCC (2001i) considered that because the site was likely to continue as an airport or would need to be replaced by another airport, it was not appropriate to

adopt SACL's proposal to use an estimate of its market value as an opportunity cost measure of aeronautical land value, in developing cost-based prices. It also argued that prices based on market value of the whole aeronautical section of the site were not necessary to ensure efficient use of airport land by SACL. Instead it valued aeronautical land by indexing the original cost of each of the land purchases that had gone into making up the current aeronautical land by CPI increases since their purchase. Hence the real value (in terms of the various CPI baskets over the years) of the land was maintained. New land purchases are to be included in the asset base at their purchase price.

The ACCC also argued that there were complexities in estimating the opportunity cost of Sydney Airport's aeronautical land. These included whether purchase or sale of the land (with associated development or clean-up costs respectively) was relevant and the considerations of externalities (costs and benefits) of relocating to a new site. Hence it concluded:

> … the Commission [ACCC] is not persuaded that SACL's proposal can be considered a measure of the true opportunity cost of land at Sydney Airport. It also concludes that such an assessment would be highly complex and well beyond the scope of this decision. (ACCC 2001i, p. 141)

The ACCC did not propose indexed historical cost as an opportunity cost concept, but rather argued that the investment and land use signals that such pricing provided to SACL would not be inappropriate for efficient decision making. However, it recognised that valuing aeronautical land at current market value would meet this criterion.

Prices based on the ACCC historical cost valuation do not provide signals to the government regarding the value aeronautical users place on the facility compared to its opportunity cost. The willingness of consumers to pay prices set on the basis of the opportunity cost of using Sydney Airport land (measured by the full market value) would assist the government in deciding whether an airport is the best use of the land.

F.3 Distributional issues

The value of land chosen in determining a regulated price has major distributional, as well as efficiency, implications. It is argued in section F1 that the efficient prices for airport services at a congested airport are those that equate demand to the (constrained) supply. A valuation of the airport that uses 'building block' prices, even those that used the full opportunity cost of the land for purposes other than an airport, are likely to undervalue the airport, in terms of the value that users place on it.

Increases in airport charges to reflect the value placed on using the airport would increase the sale value of Sydney Airport, a benefit that would accrue to the government and community at large. Lower charges, and a sale price based on these, imply that rents accrue to parties other than the owner or operator of the airport. Some of these rents currently support the reservation of slots (and low charges) for regional airlines. Some accrue to major airlines and are reflected in the high yields obtainable on peak hour flights into and out of Sydney. In part these high yields may support flights between other cities on which yields may cover marginal, but not average, costs.

G Economic regulation of privatised airports: international experiences

As noted in chapter 2, privatisation of major airport infrastructure is still relatively rare in an international context. This appendix examines some examples of the types of economic regulation that have been applied in countries where major airports have been privatised. In addition to a brief history of the privatisation process, the objectives of the chosen regulatory system, the major elements of the economic regulation and, where applicable, the performance of the regulation in meeting its objectives, are discussed.

The appendix focuses on economic regulation of privatised airports in the United Kingdom, New Zealand, Germany and Denmark that are similar in ownership and structure to those in Australia — airports with a significant amount of private ownership which are run as commercial enterprises. Economic regulation at major airports that are wholly-government-owned, or are run as non-profit organisations, such as those in the United States and Canada, is not examined.

G.1 United Kingdom

The sale of the British Airports Authority (BAA) by public float in 1987 — becoming BAA plc in the process — was one of the first (and largest) sales of government-owned airport infrastructure in the OECD.[1]

BAA was established initially in 1966, as an independent commercial enterprise under government ownership, to manage four airports — the three major London airports (Heathrow, Gatwick and Stansted) and one in Scotland (Prestwick). Between 1966 and 1987, BAA acquired a further three Scottish Airports — Edinburgh in 1971, and Aberdeen and Glasgow in 1975. Following privatisation, BAA plc purchased Southampton Airport and sold Prestwick Airport.[2]

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1 BAA was privatised under the Airports Act 1986 and 500 million shares were sold on the London Stock Exchange in July 1987.

2 Until 1990, transatlantic flights into Scotland could only go through Prestwick. The UK Government prohibited transatlantic carriers from servicing Glasgow and Edinburgh airports. As a result of legal action, this policy was rescinded and air traffic at Prestwick Airport fell

A number of UK airports were corporatised around the same time as the privatisation of BAA. Many of these corporatised airports have since been privatised — currently around two-thirds of airports regulated by the Civil Aviation Authority (CAA) (see below) have been privatised to some extent (MTAA Super Fund, sub. 22). Local government ownership of airports is also common, even for large airports such as Manchester.

Economic regulation of airports

There are two levels of economic regulation of airports in the United Kingdom. For a small number of (designated) airports that are considered to have significant market power, economic regulation consists of a Retail Price Index (RPI)-X price cap. The second level of economic regulation comprises a system of light-handed regulation for airports that achieve a pre-determined revenue threshold.

Economic regulation of airports in the United Kingdom is detailed in the Airports Act 1986 and the Civil Aviation Authority (Economic Regulation of Airports) Regulations 1986 (CAA 2000b). Regulation is administered by the CAA. As the airport regulator, the CAA is given a number of objectives to pursue under the legislation. These include:

- to further the reasonable interests of users of airports;
- to promote the efficient, economic and profitable operation of such airports; and
- to encourage investment in new facilities at airports in time to satisfy anticipated demands by users of such airports.[3]

Light-handed regulation

A system of light-handed regulation applies to airports at which annual turnover has exceeded one million pounds in two of the previous three financial years.[4] Airports that meet the revenue threshold must apply to the CAA for permission to levy

from 322 000 to 35 600 passengers. Prestwick Airport now operates almost exclusively as a cargo airport (Juan 1995).

3 However, unlike other UK regulators, the CAA has been given no specific duty to promote, or even to facilitate, competition (Cotterill 1999).

4 Airports currently excluded from regulation under the Airports Act (or the Airports (Northern Ireland) Order) are those in the Isle of Man and Channel Islands, those owned or managed by the CAA or a CAA subsidiary and those managed by the Government. An airport becomes subject to economic regulation by the CAA nine months from the end of the financial year when it first meets the turnover qualification. Should the annual turnover at a regulated airport fall below £1 million for two years, the Secretary of State may determine that the airport shall cease to be regulated.

airport charges (once granted, the permission remains in force until revoked). As of March 2000, 47 airports in the United Kingdom held CAA permission to levy charges — these include the four 'designated' airports and all of BAA plc's airports.

A key component of the system is public disclosure of airport charges and accounts. All airports holding CAA permission must provide the CAA with their annual statutory accounts, their schedules of airport charges and changes (if any) to the information provided in their original application. Airports do not need to seek CAA approval before they revise their airport charges but must notify the CAA of the charges before they take effect.

There is also provision for placing further restrictions on these airports if an airport is considered to have abused any market power it holds.

First, restrictions can result from complaints brought against an airport operator by airport users and others (including other airports) for pursuing a course of conduct specified in the Airports Act. In broad terms, complaints may be brought against an airport that:

- unreasonably discriminates against any class of users (or a particular user) of the airport; or
- unfairly exploits its bargaining position relative to users generally; or
- levies charges which are both unduly low and cause damage, or are designed to cause damage to another airport (CAA 2000b).

If the CAA considers that there is case to answer, the CAA will investigate, and where necessary, recommend actions or impose 'conditions' on the airport to rectify the situation.

Second, there is the threat that an airport may become designated by the Minister of State under section 40 of the Airports Act and, consequently, be subject to price-cap regulation. While there are no formal criteria for designation in the Airports Act, the Government has stated that it considers the relevant criteria are:

- the market position of the airport, including the degree of competition from other airports and other modes;
- prima facie evidence of excessive profitability or abuse of a monopoly position;
- the scale and timing of investment, and the implications for profitability; and
- the efficiency and quality of service (CAA 2000a).

Economic regulation at designated airports

As noted above, under the Airports Act, there are provisions for airports to be designated and become subject to more restrictive regulation than those airports holding CAA permission. Current designated airports in the United Kingdom are Heathrow, Gatwick and Stansted in London, and the major international airport in the north of England, Manchester.

Designated airports must adhere to a number of conditions in addition to those applying to airports holding CAA permission. An accounts condition, for example, requires designated airports to reveal, among other things, the revenue and costs from three classifications of their activities: airport activities, other airport-related activities and non-airport activities (CAA 2000b).

The principal feature of economic regulation of designated airports is the price cap. In practice, economic regulation of designated airports is a hybrid model of price-cap and rate-of-return regulation. The price cap, which is similar to the price caps commonly applied to other regulated industries in the United Kingdom, comprises a Retail Price Index (RPI)-X price cap applied in the form of an average revenue yield per passenger (Cotterill 1999). Airport charges subject to the price cap are those associated with the landing, take-off, and parking of aircraft, and with the processing of passengers through the terminals. As individual charges are not subject to the price cap, the airport operator has a degree of discretion with respect to the level of each individual charge and the relationship between them (Starkie 2001c).[5]

The price cap is set in advance for a five-year period, based on the CAA's view of demand, the scope for cost efficiencies, and the planned investment process. In setting the price cap, the CAA also determines a rate of return which, in its view, reflects the airport company's estimated cost of capital, and will facilitate and encourage investment.[6]

Application of the RPI-X price cap at designated airports differs from other UK-regulated industries subject to a price cap in that, when resetting the price cap, the CAA adopts a single-till approach. Under the single till, future revenues and costs are assessed on an airport-wide basis in order to determine allowable average

5 At BAA plc's designated airports, a single revenue yield price cap applies to Heathrow and Gatwick airports and a separate cap for Stansted (subject to the constraint that the charge differential between Heathrow and Gatwick is required to increase by at least one percentage point a year) (CAA 2001b).

6 The allowable rate of return for BAA plc implicit in the price cap calculations for the period 1997–2002 was 7.5 per cent.

revenue yield per passenger. That is, the regulator takes into account not only the revenue generated from aeronautical services but, in addition, the revenues generated by activities such as retailing, and the provision of rental property and other services to tenants and licensees (box G.1).

Box G.1 **UK approach to single-till price-cap regulation**

The Civil Aviation Authority and the Competition Council undertake a review process to reset the Retail Price Index (RPI)-X price cap at designated airports every five years (although this process is currently under review). The price-cap model used is similar to price caps applied in other UK regulated industries, except that a single-till approach is used to calculate the revenues the airport may earn from the provision of aeronautical services.

The procedure for calculating the price cap at designated airports under the single till comprises four main steps:

1. An agreed program of capital expenditure for the airport is determined. In addition, based on consultation between the regulators, the airports, airport users and other interested parties, the regulator determines, for the coming five-year period, estimates of:
   - traffic and passenger numbers;
   - operational expenditure; and
   - commercial revenues (revenues from non-aeronautical services).
2. The value of the airport's asset base is derived, and an allowable risk-adjusted rate of return is determined by the regulator.
3. The overall revenue required by the airport to achieve the approved rate of return is then estimated. The estimated commercial revenues are then subtracted from the overall revenue requirement to obtain the residual revenue requirement.
4. The residual revenue requirement is what airports may earn from charges from the provision of aeronautical services under the price cap. The Xs which are set by the regulator are estimated to allow the airport to recover the residual revenue requirement.

Source: Kunz (2001).

The price-cap approach to the regulation of designated airports has been in place since 1987. The cap is reset every five years by the CAA, in conjunction with the Competition Commission,[7] after an extensive review process. Every quinquennial review begins with a reference to the Competition Council, which is given six months to report its analysis and recommendations concerning the price cap, and any conclusions as to whether the airport company has acted against the public

7 Formerly the Monopolies and Mergers Commission.

interest. The Competition Council's recommendations are then made available to the public by the CAA for consultation and comment. Finally, the CAA announces its findings on the price cap, and also says how it intends to implement any public interest findings.

There is no explicit access regime for airports in the United Kingdom. There are general provisions for determinations to be made on access to 'essential' facilities on a case-by-case basis under UK and European law (ACCC, sub. 36; PC 2001a).

Regulatory review

The CAA, as part of its current quinquennial review of price caps at designated airports (due to take effect in 2003), is undertaking a fundamental review of its approach to the economic regulation of airports within the existing framework of the Airports Act. The review is broad-ranging in scope, and has arisen out of concerns that the current regulatory framework is not best suited to address a number of issues that have emerged or intensified in recent years. These include:

- demand for access to Heathrow and Gatwick exceeds available capacity;
- in the absence of an efficient market for take-off and landing slots, utilisation of existing capacity may not be optimal;
- whether incentives for the promotion of appropriate investment in capacity are efficient;
- the importance of unregulated revenue in setting charges; and
- the importance of service quality for customers and consumers and the wide range of variation in quality that different users may require (CAA 2000c).

The CAA is examining a range of options in the course of the review, including the possibility of fundamental changes to the price cap, such as:

- separating the price cap from the airport's accounting costs, possibly through benchmarking against industry best practice;
- pricing on the basis of incremental costs of increasing capacity;
- setting higher prices for additional output or capacity than for existing output levels;
- implementing a 'default price cap' with the aim of encouraging and facilitating contracting between airport operators and users outside the price cap; and
- adopting a dual-till approach to setting the price cap (CAA 2000c).

The UK experience with economic regulation of airports

The RPI-X price cap for designated airports in the United Kingdom was designed to provide profit incentives for airport operators to pursue productive efficiency gains (which eventually would be transferred to lower prices for the users of the regulated service) and to encourage allocative efficiency as airport operators have the ability to change relative prices of services regulated under the price cap.

As noted previously, price regulation at designated airports differs from other UK industries subject to a price cap in the application of a single till. The single-till approach to airport regulation in the United Kingdom stemmed from international treaty obligations[8] and concerns over equity and distributional issues. Cotterill noted that distributional concerns continue to be used as an argument to support the use of the single-till approach:

> [The Monopolies and Mergers Commission in the 1997 quinquennial reviews] pointed for example to the large windfall profits which removal of the single till would mean for the airport companies at the expense of the airlines and the universally adverse reaction of the airlines to such a change. (Cotterill 1999, p. 4)

However, as reflected in the CAA objectives in their current review (see above), there are concerns that the efficiency objectives of price-cap regulation are not being met. Concerns have been raised that the regulatory system is proving to be an impediment to the efficient pricing of current airport facilities, and that it is not providing the appropriate incentives to encourage investment in major airport infrastructure such as runways and terminals. This is especially the case at the congested BAA London airports — Heathrow and Gatwick. Other issues raised in relation to the regulatory system include the potential for 'gaming' to occur, and the high compliance costs of the system.

In particular:

- The regulatory system may cause some reluctance by airport operators to invest in large infrastructure projects (such as new runways and terminals). Apart from regulatory uncertainty associated with such long-term investment, there is the possibility that the existing system of slot allocation (where airlines have de-facto property rights to the scarcity value of the slots) combined with the single till, does not allow the airport company to realise the full value of the capacity expansion (Cotterill 1999).

8 Until 1991, the UK Government was committed to applying the single-till principle under the terms of the Bermuda II Air Agreement with the United States, although this is no longer the case (Starkie and Yarrow 2000).

- The single till has been criticised for reducing charges at congested airports below market-clearing levels and sometimes below the resource costs of providing the airside services (Starkie 2001b).
- Other incentive problems relate to the denominator of the price cap — passenger numbers. This may encourage airports to focus on passenger volumes at the expense of other outputs (eg aircraft movements that do not generate any additional passengers). There is little incentive to attract such traffic if the resulting revenues must be offset by reductions in revenue elsewhere (CAA 2001b).
- Under the regulatory system there is potential for 'gaming' because of the information asymmetry that exists between the regulator and the airport operator — the regulator does not have good information on the airport operator's ability to achieve cost efficiencies or to invest efficiently. Under this scenario, airport operators potentially can game the system, for example, by artificially inflating recorded and projected costs in order to obtain a 'looser' price cap, or by putting forward investment proposals that are 'gold plated' or are not demanded by users (CAA 2000g; Kunz 2001).[9]

The experiences of the UK regulatory system with light-handed regulation of non-designated airports holding CAA permission are less well documented — the CAA, for instance, is not examining the effectiveness of the approach to regulation as a part of its current review. However, there is some evidence that the threat of regulation under the Airports Act acts as a deterrent to the potential abuse of any market power (Kunz 1999; Starkie 2001b). BAA plc's Scottish airports were subject to a designation application, which the Government rejected on the basis of there being no evidence of abuse of a monopoly position or inefficiency. When announcing its decision, the Government added that it believed the threat of designation provided a strong incentive for BAA plc to control its charges. Possibly reflecting this, BAA plc capped its prices at both Glasgow and Edinburgh on a voluntary basis — initially with the formula RPI-3 (Starkie 2001b).

G.2 New Zealand

Private ownership of major airport infrastructure is a relatively new phenomenon in New Zealand. While eight of New Zealand's major airports were corporatised in the 1980s, including New Zealand's three international (and also largest) airports — Auckland, Wellington and Christchurch — to date, only two have been privatised.

9 The CAA, as part of its current review of the price-cap regulation, is examining a number of options that might result in a lessening of the potential to 'game'. These include the use of benchmarking (CAA 2000g) and a 'default' price cap (CAA 2001a).

Auckland and Wellington moved to majority private ownership when the national government sold its shares in 1998 (51.6 per cent in Auckland by public float, and 66 per cent in Wellington by sale — local governments still own a minority share).[10] Most airports of commercial significance in New Zealand remain government-owned, usually in the form of joint ownership between the central and local governments.

Economic regulation of airports

Economic regulation of airports in New Zealand is unusual in an international context. New Zealand has adopted what has been referred to as a 'light-handed' approach, with major airports not subject to any direct economic regulation. Although there are examples internationally of government-owned major airports not subject to direct regulation, indirect economic regulation of privatised airports is more unusual.

The New Zealand approach to economic regulation of airports is in line with the approach the Government adopted with former state-owned industries in the 1990s. In general, this approach focused on:

- requiring the disclosure of prices, terms and conditions for contractual arrangements, costs, performance measures, and financial performance indicators;
- the use of the Commerce Act 1986 to control anti-competitive behaviour; and
- threats of further regulation, such as price control if market dominance is abused, but perhaps in a different form than was previously employed in New Zealand (PSA 1995).

The desired outcome of this type of light-handed regulation was negotiated outcomes between parties, without the need for direct intervention by the Government.

The New Zealand approach to economic regulation is implemented for airports through the Airport Authorities Act 1966 and the Commerce Act 1986. The Airport Authorities Act 1966 requires New Zealand airport companies to, among other things:

- consult with airlines over charges. Where proper consultation processes are not carried out, airport users can initiate legal proceedings (section 4.2(a)); and

10 Christchurch Airport was corporatised in 1988 with ownership transferred to Christchurch International Airport Limited, a company jointly owned by the Christchurch City Council (75 per cent) and the New Zealand Government (25 per cent).

- disclosure of prices, terms and conditions for contractual arrangements, costs, performance measures and financial performance indicators (section 3BA).

Airport companies, like other companies in New Zealand, are subject to the general competition law provisions under the Commerce Act 1986. Several sections of the Commerce Act are relevant to the regulation of airports, in particular Part IV,[11] which enables the Governor-General, on the recommendation of the Minister of Commerce, to impose price controls in circumstances of restricted competition.

Privatised airports and light-handed regulation

In 1989, the New Zealand Government commissioned a review into the implications of a light-handed approach to regulation for the 'actual and potential abuse of monopoly power' by airports. The review formed part of the Government's deliberations into an appropriate regulatory framework for the future privatisation of airports. The review considered that a light-handed approach to regulation was appropriate because:

- the major airport users, the airlines, had sufficient countervailing power to counteract the monopoly power of the airport companies which would not be significantly diminished by the sale of the airports to private interests;
- the transparency required by the Airports Authorities Act, through the consultation process, contributed to the exercise of the airlines' countervailing power and that the current level of transparency could be maintained post-privatisation, with some small changes to the legislation;
- there were unlikely to be net efficiency gains from privatising the airports if this was accompanied by increased regulatory intervention; [and]
- the provisions of the Commerce Act, which provide for the application of price controls, act as a constraint on airport pricing, while the prices of services to passengers and visitors to the airport are constrained by actual or potential competition and by other provisions of the Commerce Act … (PSA 1995, p. 15)

Regulatory review

The light-handed approach to the economic regulation of some airports in New Zealand currently is under review. The review commenced in 1998 when the New Zealand Government directed the Commerce Commission (CC) to examine whether

11 Other sections of relevance include: Part II, which covers restrictive trade practices, and also contains provisions relating to resale price maintenance and market dominance; and Part III which prevents acquisitions that would result in a dominant position or a strengthening of such a position.

price controls should be introduced for airfield activities[12] at Auckland, Wellington and Christchurch airports. Broadly, the terms of reference require the CC to report on four issues:

- whether there is limited competition for airfield activities;
- whether control is necessary or desirable in respect of the charges for airfield activities;
- whether market conditions are such that the Minister should make a recommendation resulting in the imposition of control over such charges; [and]
- the nature and extent of any price control measures that would be introduced (where applicable). (CC 2001a, para. 31)

Although the scope of the review is limited to airfield activities, the terms of reference require the CC to consider the impact of other airport activities. 'However, in reporting to the Minister, the [CC] … intends to confine its recommendations to airfield activities' (CC 2001a, para. 33).

The CC released its draft report in July 2001 (CC 2001b). The preliminary recommendation is for price controls to be introduced at Auckland Airport only. In addressing the terms of reference for the review, the CC found there is evidence that:

- airfield activities … are supplied or acquired in a market in which competition is limited or is likely to be lessened; [and]
- there is evidence that it is necessary or desirable for the prices of the airfield activities supplied by … [Auckland and Christchurch airports] to be controlled in accordance with the Commerce Act in the interests of the acquirers of airfield activities. (CC 2001b, p. xliv)

However, based on an assessment of the net efficiency benefits of introducing price control, the CC found that only airfield activities supplied by Auckland Airport should be controlled.

Although a recommendation has been made that price control is required at Auckland Airport, as yet no recommendation has been made on the type of price-control system to be applied. If price control is recommended in the final report,

[12] The Airport Authorities Amendment Act 1997 defines airfield activities as one of three identified airport activities — the others being: aircraft and freight activities; and specified passenger terminal activities. Airfield activities cover facilities and services that enable the landing and take-off of aircraft, including: the provision of airfields, runways, taxiways, and parking aprons; facilities and services for air traffic and parking control; airfield lighting; and services to maintain and repair airfields, runways, taxiways, and parking aprons for aircraft (CC 2001a).

then a decision on the type of model will be made after undertaking a consultation process as specified in the Commerce Act.

The New Zealand experience with economic regulation

In practice, it appears a number of the objectives of light-handed regulation have not been met. The costs of using the system, both to airports and airport users, appear to have been high. The effectiveness of airlines' countervailing power to act as a constraint on the exercising of any market power by airport operators, under this system, also has been questioned.

The regulatory system appears to have been characterised by a high degree of uncertainty, both in terms of implementation, and how it might evolve over time. Since 1989, there have been three reviews of the regulatory system. As the current review commenced at around the same time as the privatisation of Auckland and Wellington airports in 1998, there has been potential for gaming and strategic behaviour by both airports and airport users in an attempt to influence the outcome of the review.

The regulatory system has resulted in a high incidence of litigation between airport users and airport operators and (in some instances) the Government, in part over interpretation of key elements of the legislative framework. The most well-documented of these was a case instigated by Air New Zealand and a number of airline companies and associations[13] against Wellington International Airport Limited (WIAL) in 1992 over the meaning of the term 'consultation' in the context of setting airport charges. The action was brought about after a WIAL decision to increase landing charges, which the airlines claimed adversely affected them. In essence, the airlines claimed that WIAL had failed to allow them to put their case because it ended the consultation process too quickly. After the High Court of New Zealand initially found in favour of the airlines, an appeal heard by the Court of Appeal of New Zealand reversed the decision on the matter of consultation in favour of WIAL (PSA 1995).

The Prices Surveillance Authority (PSA) noted:

> The costs of litigation, including the uncertainty of outcomes, associated with the New Zealand approach have been considerable. These costs appear to have been underestimated in the development of the regulatory framework. Recourse to the Court system has not been shown to be the most appropriate or cost effective way to solve the consultation and pricing disagreements which have arisen. (PSA 1995, p. iii)

13 These were Qantas, Bilmans Management Limited (Ansett) and The Board of Airlines Representatives of New Zealand.

The high incidence of litigation between airports and airlines has also been cited as evidence of the lack of countervailing power of airlines. Under the regulatory system, it has been argued, airlines faced with increased airport charges have had little other recourse available to them than to resort to litigation (PSA 1995). However, the regulatory regime may have promoted the use of litigation. It is also possible that airlines have been exercising countervailing power by initiating or threatening expensive litigation.

The CC noted in general that 'neither Auckland, Wellington or Christchurch international airport[s] are likely to be significantly constrained by the countervailing power of airlines' (CC 2001b, p. 77). Countervailing power of airlines at these airports was constrained as, unlike smaller regional airports, the airports are unlikely to be dependent on a small number of airlines for their business.

A key component of the New Zealand regulatory framework was threat of explicit price regulation acting as a deterrent to airports exploiting (any) market power with their dealings with airlines. The uncertainty surrounding the regulatory framework through the 1990s has, at various stages, raised questions about the credibility of this threat. For the threat to be credible, airport operators would have to regard there being a strong likelihood of price controls being introduced. Some argued that during the mid-1990s there was very little chance of this occurring. For example, Kunz noted:

> The NZ Commerce Act is primarily directed towards preventing restrictions on competition not monopoly pricing and, therefore, provides no forceful provisions. It indeed allows for price regulation to be invoked, but unless an expert regulation body with applicable instruments is at hand, the threat of regulation is not credible at all. (Kunz 1999, p. 39)

The PSA also noted that the disinclination of the then New Zealand Government to introduce price regulation generally reduced the threat of any such regulation being applied to the airports sector.

> … both the Government and the Commerce Commission [in 1995] have made clear their reluctance to implement or recommend price control, thereby undermining the threat of its use. (PSA 1995, p. 11)

However, recent experience indicates that the threat of price regulation is indeed credible (specifically the CC's review of the need for price regulation at New Zealand's international airports). Forsyth noted the threat of price controls, combined with the current review 'would be a deterrent to [airport operators] using market power and setting high charges' (Forsyth 2001, p. 12).

G.3 Germany

Economic regulation of airport infrastructure in Germany is currently undergoing a period of change. While most major airports remain subject to some variant of cost-based regulation based on a single till, the recent privatisation of airport infrastructure has been associated with a move to incentive-based regulation. Nonetheless, Hamburg is the only airport where incentive-based regulation has been introduced.[14]

Hamburg Airport was partially privatised in 2000.[15] A new regulatory system was adopted for the privatised airport, specified in a public contract between Hamburg Airport and the Ministry of Economic Affairs of Hamburg. The contract is in place for five years, from the beginning of 2000 to the end of 2004.

The basis of the regulation at Hamburg Airport is a dual-till CPI-X price cap, based on revenue yield per passenger. The price cap applies to landing fees, passenger handling fees, noise level charges and aircraft parking fees. The airport must also attain quality of service targets under the regulatory framework. These include:

- availability of aircraft parking positions;
- availability and punctuality of passenger and baggage transport systems; and
- availability and quality of restaurants and retailers.

The distinctive feature of the price-cap regulation at Hamburg is that it is based on a sliding scale. For the five-year period the price cap is in place the X value is fixed at 2. However, if in any year growth in passenger numbers at the airport exceeds a threshold number, then the X factor is increased the following year. For every percentage point increase in passenger growth greater than three, X is increased by 0.5. The objective of the sliding scale is to reduce the possibility of the airport achieving 'windfall profits'. There is no provision for the X value to fall if passenger numbers decline (Niemeier 2001).

Capital expenditure is dealt with outside the cap, with potential projects having to pass a public review process.

14 A price cap is planned to be introduced at Berlin Brandenburg International Airport when the current privatisation process is completed.

15 Hochtief AirPort GmbH and Aer Rianta acquired a 36 per cent share, with an option for a further 13 per cent. The City of Hamburg remains Hamburg Airport's major shareholder.

G.4 Denmark

The system of economic regulation employed at Copenhagen Airport is another variant of price-cap regulation. The approach has been to implement a system that creates the incentive properties of price-cap regulation but on a more informal basis than those used at airports in the United Kingdom and Germany.

Copenhagen Airport is owned and operated by a publicly listed company, Københavns Lufthavne A/S, although the national Government holds 51 per cent of the shares in the company. The airport is not subject to an explicit price cap, but it is not permitted to increase charges without approval from the national Government. If the airport operator wishes to increase charges it has to submit detailed information to the Ministry of Transport, justifying the increase. If airlines wish to dispute the proposed charges they can also make a submission to the Ministry.

The approach appears to be designed to provide similar incentives to those that exist with a price cap (by providing airports with an incentive to reduce costs, and airlines with decreasing airport charges in real terms) with the advantage of lower compliance costs compared to more formal price-cap arrangements. However, as any increase in airport charges requires approval from the regulator — which will involve, to some extent, an assessment of the costs, revenues and profitability of the airport — the system will be subject to some of the problems associated with cost-based regulation discussed above (for example, the information asymmetry and compliance cost issues discussed in section G.1).

While there appears to be no formal criteria against which proposals are judged, the Ministry of Transport has stated that the airport should be allowed to make a reasonable profit (TRL 2000b). Since 1992, there has only been one price increase at Copenhagen Airport — a 15 per cent increase in 1999. This increase was associated with the abolition of the availability of duty-free goods on intra-European travel in June of that year.

G.5 Summary of international experiences

As the above case studies illustrate, there is no universal approach to economic regulation of privatised airports internationally. The mix of regulatory and market mechanisms adopted by governments, with respect to the provision of aeronautical services at major airports, differs substantially between (and sometimes within) countries.

Where governments have chosen to implement direct economic regulation, the most common approach is to use incentive-based regulation, primarily price-cap

regulation. However, the details of the price-cap regulation can differ substantially. Not all countries have chosen to introduce direct economic regulation. New Zealand and the United Kingdom (for non-designated airports holding CAA permission) have adopted approaches based primarily on market mechanisms and price monitoring.

Of the countries examined, New Zealand and the United Kingdom (for designated airports) represent the extremes of approaches to economic regulation of airport operators. Both regimes have been in place for over 10 years (although major airports only were privatised in New Zealand in 1998) and both are currently subject to review.

The UK approach to regulation is being reviewed because of a number of concerns, including that the system is resulting in inefficient pricing of current infrastructure, is not providing conditions that encourage long-term investment in airport infrastructure, and is creating potential for gaming. The costs of administering the system also appear to be high.

Some of the experiences of the UK approach to regulation at designated airports highlight a number of difficulties with maintaining price caps in the long term. Specifically, long-term price caps can generate problems often associated with cost-based regulation such as rate-of-return regulation.

With an ongoing price-cap regime, the airport operator faces a review after a designated period when the price cap is reset. This often involves an assessment by the regulator of the level of profits that the airport operator may earn in the coming period. This process can create incentives for firms to pad their costs or not to make efficiency gains especially late in the regulating period, as these gains will be appropriated by the regulator through higher Xs (see chapter 10 for a discussion of the incentive problems of rate-of-return and ongoing price-cap regulation).

The regulatory systems introduced by governments in Germany (Hamburg Airport) and Denmark (Copenhagen Airport) represent, in part, different attempts at dealing with some of the incentive problems that arise under long-term, price-cap regulation. The sliding-scale approach at Hamburg Airport, where the X values are increased during periods when airports are likely to earn 'windfall' profits, is an attempt to ensure that airport operators share profits with airport users through lower prices. In contrast, in Denmark, by not having any systematic review of the price cap at Copenhagen Airport, airport operators are able to retain any profits as long as nominal prices remain unchanged. This reduces the incidence of intervention by the regulator and airports are free to pursue efficiency objectives, as the benefits can be retained.

The effectiveness of these regimes in the long term remains to be seen. If, for example, after the current five-year price cap expires at Hamburg Airport, a new price cap were introduced, then the regulatory system may create many of the same incentives as found in the UK system. Also, for both Hamburg and Copenhagen airports, there is the issue of how airport infrastructure develops over the long term. In both cases it appears that the regulator is directly involved in approving airport infrastructure with the associated problems of having the regulator as the final arbiter on the appropriateness of a commercial investment decision.

The New Zealand approach is unusual in that there is currently no direct economic regulation. Instead, the system relies on the countervailing power of airlines, and the threat of direct price regulation should airports abuse any market power they hold. However, disagreements between airports and airlines over regulatory requirements in consulting about proposed price increases have often resulted in litigation. In addition, there has been considerable uncertainty in regard to the regulatory approach, indicated by the high number of reviews, which in itself could have resulted in gaming by both airlines and airports.

An example of a more successful approach to light-handed regulation appears to have been the system employed in the United Kingdom for non-designated airports holding CAA permission. The attributes of the system, such as having a credible threat of future price regulation (as demonstrated with the price-cap regulation at designated airports), combined with the complaints system available to airport users (and others), appear to have been reasonably successful in preventing the abuse of any monopoly power by airports and in achieving efficient outcomes.

References

AAL (Adelaide Airport Ltd) 2000, *Annual Report 1999-2000*.

ACCC (Australian Competition and Consumer Commission) 1996, *Statement for the Public Register on Proposed Aeronautical Charges at FAC Airports*, September.

—— 1997a, *Administration of Airport Price Cap Arrangements*, January.

—— 1997b, *Quality of Service Monitoring for Airports, Post-leasing*, February.

—— 1998a, *Economic Regulation of Airports: An Overview*, July.

—— 1998b, *Fuel Throughput Levies: Report pursuant to the Commission's Monitoring Functions under the Prices Surveillance Act 1983*, December.

—— 1998c, *Melbourne Airport Access Undertaking: Draft Determination*, May.

—— 1998d, *Perth Airport Access Undertaking: Draft Determination*, May.

—— 1998e, *Quality of Service Monitoring for Airports: Statement of the ACCC's Approach to Analysis, Interpretation and Publication of Quality Information*, February.

—— 1998f, *Regulatory Information Requirements under Part 7 of the Airports Act 1996 and Sections 21 and 27A of the Prices Surveillance Act 1983: Guideline*, Version no. 2, September.

—— 1998g, *Section 192 of the Airports Act: Declaration of Airport Services — Draft Guide*, AusInfo, Canberra.

—— 1998h, *Statement for the Public Register on Proposed Aeronautical Charges at Sydney (Kingsford Smith) Airport*.

—— 1999a, *ACCC declares vehicle access services at Melbourne Airport*, Media Release no. 64/99, 17 May.

—— 1999b, *Adelaide Airport: Proposal to Pass Through the Price Cap the Costs of a Multi-User Integrated Terminal — Decision*, October.

—— 1999c, *Draft Statement of Principles for the Regulation of Transmission Revenues*, May.

—— 1999d, *Delta Car Rentals Request for Determination — Statement of Reasons*, April.

—— 1999e, *Regulatory Report: Brisbane Airport, 1998-99*, December.

—— 1999f, *Regulatory Report: Perth Airport, 1998-99*, December.

—— 2000a, *Infrastructure Industries: Aviation*, May.

—— 2000b, *New Investment Costs Pass-through*, Position Paper, April.

—— 2000c, *Perth Airport: Proposal to Increase Aeronautical Charges to Recover the Costs of Necessary New Investment — Final Decision*, April.

—— 2000d, *Regulatory Reports: Phase II, 1998-99*, March.

—— 2000e, Submission to the Productivity Commission's Review of the National Access Regime, Sub. 25, December.

—— 2001a, *Melbourne Airport, Necessary New Investment: Taxi Charge Proposal, Decision*, May.

—— 2001b, *Regulatory Report: Brisbane Airport, 1999-00*, April.

—— 2001c, *Regulatory Report: Melbourne Airport, 1999-00*, April.

—— 2001d, *Regulatory Report: Perth Airport, 1999-00*, April.

—— 2001e, *Regulatory Report: Sydney Airport, 1999-00*, April.

—— 2001f, *Regulatory Reports: Phase II, 1999-00*, April.

—— 2001g, *Review of Price Control Arrangements*, February.

—— 2001h, *Sydney Airports Corporation Ltd: Aeronautical Pricing Proposal — Draft Decision*, February.

—— 2001i, *Sydney Airports Corporation Ltd: Aeronautical Pricing Proposal — Decision*, May.

—— 2001j, *Virgin Blue Request for a Determination*, Issues Paper, March.

ACT (Australian Competition Tribunal) 2000, Sydney International Airport [2000] AcompT 1, 1 March, http://www.austlii.edu.au/au/cases/cth/ACompT/2000/1.html (accessed 6 April 2001).

ADR (Aeroporti di Roma) (no date), *Areas of Business*, http://www.adr.it/en/soc/societa-03.html (accessed 24 May 2001).

Aer Rianta (no date), *Current Structure*, http://www.aer-rianta.ie/htmlonly/ar/htm/struct/index.htm (accessed 24 May 2001).

Anderson, J. (Deputy Prime Minister and Minister for Transport and Regional Services) and Gosche, M. (New Zealand Minister for Transport and Minister Responsible for Civil Aviation) 2000, *Australia - New Zealand open skies agreement*, Joint Media Release no. A182/2000, 20 November.

—— and Kemp, R. (Acting Minister for Finance and Administration) 2001, *Sale of Sydney (Kingsford-Smith) Airport*, Joint Media Release no. A11/2001, 29 March.

APAC (Australia Pacific Airports Corporation) 1998, *Delta Car Rentals, Request for Determination Under Section 192 of the Airports Act*, Submission to the ACCC, December.

—— 2000a, *Annual Report 1999-00*.

—— 2000b, Submission to the Productivity Commission's Review of the National Access Regime, Sub. 10, December.

—— 2001, *Review of the National Access Regime: Comments on Position Paper*, Submission to the Productivity Commission's Review of the National Access Regime, Sub. DR60, May.

ASA (Airservices Australia) 2000, *Charges for Facilities and Services: Standard Contract Terms, 1 July*, Canberra.

Averch, H., and Johnson, L. 1962, 'Behavior of the firm under regulatory constraint', *American Economic Review*, vol. 52, no. 5, pp. 1052–69.

BAC (Brisbane Airport Corporation) 2001, *Airport announces release of new land*, Media Release, 22 February.

BARA (Board of Airline Representatives Australia) 2000, *Submission to the ACCC Regarding Sydney Airport Corporation Limited's Draft Pricing Proposal*, November.

Baumol, W.J., Panzar, J.C. and Willig, R.D. 1982, *Contestable Markets and the Theory of Industry Structure*, Harcourt Brace Jovanovich, New York.

Betancor, O. and Rendeiro, R. 1999, 'Regulating privatized infrastructures and airport services', World Bank Policy Research Working Paper no. 2180, September.

BTCE (Bureau of Transport and Communications Economics) 1995, *Demand Elasticities for Air Travel to and from Australia*, Working Paper no. 20, AGPS, Canberra.

BTR (Bureau of Tourism Research) 2000a, *International Visitors in Australia, 1999*, Canberra.

—— 2000b, *Travel by Australians 1999: Annual Results of the National Visitor Survey*, Canberra.

Button, K. and Stough, R. 2000, *Air Transport Networks: Theory and Policy Implications*, Edward Elgar Publishing Limited, Cheltenham, United Kingdom.

CAA (Civil Aviation Authority) 2000a, *Easyjet Application for Designation of Luton Airport*, London, http://www.caaerg.co.uk (accessed 7 June 2001).

—— 2000b, *Economic Regulation of Airports — General Guidance*, London, http://www.caaerg.co.uk (accessed 7 June 2001).

—— 2000c, *Issues for the Airport Reviews*, Consultation Paper, London, http://www.caaerg.co.uk (accessed 7 June 2001).

—— 2000d, *Quality of Service Issues*, Consultation Paper, London, http://www.caaerg.co.uk (accessed 7 June 2001).

—— 2000e, *The CAA Approach to Economic Regulation and Work Programme for the Airport Reviews*, Position Paper, London, http://www.caaerg.co.uk (accessed 1 June 2001).

—— 2000f, *The 'Single Till' and the 'Dual Till' Approach to the Price Regulation of Airports*, Consultation Paper, London, December.

—— 2000g, *The Use of Benchmarking in the Airport Reviews*, Consultation Paper, London, http://www.caaerg.co.uk/ (accessed 7 June 2001).

—— 2001a, *Direct Contracting Between Airport Users: A Default Price Cap*, Consultation Paper, London, http://www.caaerg.co.uk (accessed 7 June 2001).

—— 2001b, *Pricing Structures and Economic Regulation*, Consultation Paper, London, http://www.caaerg.co.uk (accessed 7 June 2001).

CC (Commerce Commission, New Zealand) 2001a, *Price Control Study of Airfield Activities*, Critical Issues Paper, Wellington, March.

—— 2001b, *Price Control Study of Airfield Activities at Auckland, Wellington, and Christchurch International Airports*, Draft Report, Wellington, July.

Chanticleer 2001, 'Airport bids growth conundrum', *Australian Financial Review*, 12 June, p. 72.

Cheesman, B. 2001, 'Malaysia's aviation goal up in the air', *Australian Financial Review*, 1 August, p. 9.

Commonwealth of Australia 1998a, Airport lease for Townsville airport.

—— 1998b, Crown lease, Airport lease for Canberra airport.

Costello, P. (Treasurer) 1997, *Prices monitoring at privatised airports*, Press Release no. 69, 27 June.

—— (Treasurer) 1998, *Prices oversight of privatised airports*, Press Release no. 55, 25 May.

—— and Anderson, J. (Minister for Transport and Regional Services) 1999, *International Air Services*, Joint Media Release no. A79/99, 3 June.

Cotterill, R.M. 1999, Experience of price caps in UK airport regulation, Speech presented at the Incentive Regulation and Overseas Developments Conference, ACCC, Sydney, 18–19 November.

CPA (Cairns Port Authority) 2000, *Annual Report 1999-00*.

Crew, M.A. and Kleindorfer, P.R. 2001, *Regulation for Privatized Airports: Single-Till Versus Multi-Till Pricing Methodologies for Sydney Airport*, Paper submitted to the ACCC's review of Sydney Airport's aeronautical pricing proposal.

Davidson, K. 2001, 'Essendon's value is not as an airport', *The Age*, 19 April, p. 17.

Doganis, R. 1992, *The Airport Business*, Routledge, London.

DoTRD (Department of Transport and Regional Development) 1996, *Pricing Policy Paper*, Canberra, November.

DoTRS (Department of Transport and Regional Services) 2000a, *Air Transport Statistics, International Scheduled Air Transport, 1999-00*, AVSTATS, Canberra.

—— 2000b, *Air Transport Statistics: Regular Public Transport Services, Airport Traffic Data, 1989-90 – 1999-00*, AVSTATS, Canberra.

—— 2000c, Australian airport operations in the context of privatisation, Presentation to the ICAO ANS conference, June, Montreal.

—— 2001, *Domestic Airlines Monthly Activity Report, March 2001*, AVSTATS, Canberra.

Europe Economics 2001, *Airport Cost Allocation: Report for the CAA by Europe Economics*, London, April.

Ewers, H. et al 2001, *Possibilities for the Better Use of Airport Slots in Germany and the EU: A Practical Approach*, Commissioned by Hochtief AirPort GmbH, Berlin, January.

FAC (Federal Airports Corporation) 1996, *Annual Report 1995-96*, Sydney.

—— 1997, *Annual Report 1996-97*, Sydney.

—— 1998, *Annual Report 1997-98*, Sydney.

Federal Court of Australia 2001, Canberra International Airport Pty Ltd v Australian Competition and Consumer Commission [2001] FCA 289, 23 March.

Forsyth, P. 1999, Regulating access to airport facilities, Paper presented at the Air Transport Research Group Conference, City University of Hong Kong, 6–8 June.

—— 2001, Privatisation and regulation of Australian and New Zealand airports, Paper presented at 4th Hamburg Aviation Conference, 'Regulation versus Competition? Strategic Airport Management', Hamburg University, 14–16 February.

Harris, P. 1997 (FAS, Aviation Policy, Department of Transport and Regional Development), Post privatisation regulatory environment, Synopsis of presentation to 'Airports 97 Future Perspectives Conference', Melbourne, 11 August.

HoR (House of Representatives) 1995, 2nd reading speech of the Competition Policy Reform Bill, 30 June, p. 2800.

IATA (International Air Transport Association) 2001, *About Us: Mission and Goals*, http://www.iata.org/missgoal.htm (accessed 11 April 2001).

IC (Industry Commission) 1992, *Intrastate Aviation*, Report no. 25, AGPS, Canberra.

ICAO (International Civil Aviation Organization) 1996, *Manual on the Regulation of International Air Transport*.

Juan, J. 1995, *Airport Infrastructure: the Emerging Role of the Private Sector — Recent Experiences Based on 10 Case Studies*, Cofinancing and Financial Advisory Services Discussion Paper Series no. 115, World Bank, Washington.

Kahn, A.E. 1988, *The Economics of Regulation: Principles and Institutions*, MIT Press, Cambridge, Massachusetts.

—— 1991, Statement on Behalf of United Kingdom of Great Britain and Northern Ireland in US/UK Arbitration Concerning Heathrow Airport User Charges, April.

—— 2001, *Evidence on Behalf of Sydney Airports Corporation*, NERA, New York, January.

Kemp, R. (Assistant Treasurer) 2000, *Productivity Commission Inquiry into Prices Oversight Arrangements at Airports*, Press Release no. 056, 21 December.

King, S. 2000, 'Access: what, where and how', in Productivity Commission and Australian National University, *Achieving Better Regulation of Services*, Conference Proceedings, AusInfo, Canberra, pp. 63–93.

Kunz, M. 1999, 'Airport Regulation: the Policy Framework', in Pfähler, W., Niemeier, H. and Mayer, O.G. (eds), *Airports and Air Traffic: Regulation, Privatisation and Competition: [Economic Forum of the Free and Hanseatic Hamburg]*, Peter Lang, Frankfurt, pp. 11–55.

—— 2001, Airport regulation: lessons from the UK, Paper presented at the 4th Hamburg Aviation Conference, 'Regulation versus Competition? Strategic Airport Management', Hamburg University, 14–16 February.

Law Council of Australia 2001, *Legislation Review of Clause 6 of the Competition Principles Agreement and Part IIIA of the Trade Practices Act 1974*, Submission to the Productivity Commission's review of the National Access Regime, Sub. 37, January.

Littlechild, S.C. 1983, *Regulation of British Telecommunications Profitability: A Report to the Secretary of State for Trade and Industry*, Department of Trade and Industry, United Kingdom.

Melbourne Airport 2001, *Introduction of Taxi Parking Charge*, March.

NCC (National Competition Council) 1997, *Applications for declaration of certain airport services at Sydney and Melbourne International Airports: Reasons for Decision*, 8 May.

—— 2001, *Legislation Review of Clause 6 of the Competition Principles Agreement and Part IIIA of the Trade Practices Act 1974*, Submission to the Productivity Commission's Review of the National Access Regime, Sub. 43, January.

Niemeier, H. 2001, Regulating airports, Paper presented at the 4th Hamburg Aviation Conference, 'Regulation versus Competition? Strategic Airport Management', Hamburg University, 14–16 February.

NECG (Network Economics Consulting Group) 2000a, *'Dual Till' at Sydney Airport: A Report Prepared for the Australian Competition and Consumer Commission by the Network Economics Consulting Group*, Final Report, May.

—— 2000b, *Land Valuation at Sydney Airport*, Report prepared for the ACCC, Final Report, May.

NERA (National Economic Research Associates) 2001, *Global Energy Regulation*, Newsletter, Issue no. 24, http://www.nera.com (accessed 30 June 2001).

NTTC (Northern Territory Tourist Commission) 2000, *Territory Tourism Selected Statistics 1999/2000*, http://www.nttc.com.au/statistics/g_method_of_entry.htm (accessed 20 June 2001).

OECD (Organisation for Economic Co-operation and Development) 2000, *Airline Mergers and Alliances*, Committee on Competition Law and Policy, Competition Policy Roundtables no. 26, DAFFE/CLP (2001)1, Paris.

Oum, T.H.O., Waters, W.G. and Yong, J. 1992, 'Concepts of price elasticities of transport demand and recent empirical estimates', *Journal of Transport Economics and Policy*, vol. 26, no. 2, pp. 139–54.

PC (Productivity Commission) 1998a, *International Air Services*, Report no. 2, AusInfo, Canberra.

—— 1998b, *Regulation and its Review 1997-98*, AusInfo, Canberra.

—— 2001a, *Review of the National Access Regime*, Position Paper, Canberra, March.

—— 2001b, Review of the Prices Surveillance Act 1983, draft report public hearing transcripts, 8 June, Melbourne, p. 9.

—— 2001c, *Review of the Prices Surveillance Act 1983*, Draft Report, Canberra, March.

—— 2001d, *Telecommunications Competition Regulation*, Draft Report, Canberra, March.

Pitchford, R. 2000, *Sydney Airport Land Valuation: An Assessment*, ACCC Consultancy Report, http://www.accc.gov.au/airport/fs-air.htm (accessed 20 June 2001).

PSA (Price Surveillance Authority) 1993, *Inquiry into the Aeronautical and Non-Aeronautical Charges of the Federal Airports Corporation*, Report no. 48, Melbourne.

—— 1995, *Regulation of Airport Pricing — Is the New Zealand Approach Applicable to Australia?*, Discussion Paper no. 8, Melbourne.

SACL (Sydney Airports Corporation Limited) 2000, *Sydney Airport Revised Draft Aeronautical Proposal*, September.

—— 2001, *Sydney Airport, Aeronautical Pricing Proposal, Response to ACCC Draft Decision*, March.

Salazar de la Cruz, F. 1999, 'A DEA approach to the airport production function', *International Journal of Transport Economics*, vol. 26, no. 2, pp. 255–70.

Starkie, D. 2001a, 'Airport regulation and competition', *Journal of Air Transport Management*, vol. 7, no. 5 (forthcoming).

—— 2001b, 'A new deal for airports', in Robinson, C. (ed.), *Regulating Utilities: New Issues, New Solutions*, Edward Elgar Publishing Limited, Cheltenham, United Kingdom.

—— 2001c, 'Reforming UK airport regulation', *Journal of Transport Economics and Policy*, vol. 35, part 1, pp. 119–135.

—— and Thompson, D. 1985, *Privatising London's Airports*, Institute of Fiscal Studies, Report Series no. 16, London.

—— and Yarrow, G. 2000, *The Single-Till Approach to the Price Regulation of Airports*, CAA, London, July, http://www.caaerg.co.uk (accessed 7 June 2001).

Stigler, G.J. 1969, *The Theory of Price*, 3rd edn, Macmillan, London.

Tirole, J. 1990, *The Theory of Industrial Organization*, MIT Press, Cambridge, Massachusetts.

Toms, M.R. 1994, 'Charging for airports: the new BAA approach', *Journal of Air Transport Management*, vol. 1, no. 2, pp. 77–82.

Tourism New South Wales 2001, *Big Sky Country Region Tourism Profile, Year end June 2000*, Tourism New South Wales, Sydney.

Tourism Queensland 2000a, *Fact Sheet — Brisbane*, http://www.tq.com.au/research/pdf/regional/brisbane.pdf (accessed 20 June 2001).

—— 2000b, *Fact Sheet — Gold Coast*, http://www.tq.com.au/research/pdf/regional/goldcoast.pdf (accessed 20 June 2001).

—— 2000c, *Fact Sheet — Queensland*, http://www.tq.com.au/research/pdf/regional/TotalQld.pdf (accessed 20 June 2001).

—— 2000d, *Fact Sheet — Tropical North Queensland*, http://www.tq.com.au/research/pdf/regional/tnq.pdf (accessed 20 June 2001).

Tourism Tasmania 2001, *Tasmanian Visitor Survey 2000 Data Card*, http://www.tourismtasmania.com.au/research/dcard2000/ (accessed 20 June 2001).

Tretheway, M. 1996, 'Giving airports an incentive', *Airport World*, no. 3, pp. 36–40.

TRL (Transport Research Laboratory) 2000a, *Airport Performance Indicators 2000*, Crowthorne, United Kingdom.

—— 2000b, *Review of Airport Charges 2000*, Crowthorne, United Kingdom.

Vogelsang, I. 2001, A 20-year perspective on incentive regulation for public utilities, Paper presented at the Regulation and Investment Conference, ACCC, Sydney, 26–27 March.

—— and Finsinger, J. 1979, 'A regulatory adjustment process for optimal pricing by multiproduct monopoly firms', *Bell Journal of Economics*, vol. 10, no. 1, pp. 157–71.

Walters, A.A. 1978, 'Airports: an economic survey', *Journal of Transport Economics and Policy*, vol. 12, no. 2, pp. 125–60.