



**Submission to the Productivity Commission's inquiry
into price regulation of airport services**

August 2006

© Commonwealth of Australia 2006

This work is copyright. Apart from any use as permitted under the *Copyright Act 1968* no part may be reproduced by any process without permission from the Australian Competition and Consumer Commission. Requests and inquiries concerning reproduction and rights should be addressed to the Director Publishing, Australian Competition and Consumer Commission, PO Box 1199, Dickson ACT 2602.

Contents

Summary	v
Glossary	xi
1 Introduction	1
2 The current regulatory arrangements applying to airports	3
2.1 Economic characteristics of airports in Australia	3
2.1.1 Market power of airports in 2002.....	3
2.1.2 Changes in market power of airports since 2002	6
2.1.3 Constraints on market power	14
2.1.4 The effects of the use of market power.....	21
2.1.5 Conclusions on market power	22
2.2 Previous arrangements for regulated airports	23
2.2.1 Government ownership of airports	23
2.2.2 Privatisation	25
2.3 PC findings and Government response	28
2.3.1 Key findings of the PC (2002)	29
2.3.2 PC recommendations and Government responses	30
2.4 The introduction of ‘light-handed’ regulation.....	31
2.4.1 Meaning of ‘light-handed’ regulation	32
2.4.2 Rationales for move to ‘light-handed’ regulation	33
2.4.3 Summary of introduction of ‘light-handed’ regulation.....	39
2.5 Description of the formulation and execution of the ACCC monitoring regime.....	39
2.5.1 Formulation of the current monitoring regime.....	39
2.5.2 How the ACCC has carried out its monitoring role.....	43
2.6 Asset valuation	57
2.6.1 Introduction	57
2.6.2 The practice of airports in valuing aeronautical assets	58
2.6.3 How should aeronautical assets be valued?	60
2.7 Regulated access to airport services.....	63
2.7.1 Airports-specific access arrangements, 1997–2002.....	64
2.7.2 Access to airport services under Part IIIA of the Trade Practices Act.....	65
3 Assessing the effectiveness of the current regime.....	69
3.1 Findings of the ACCC’s monitoring	69
3.1.1 Price monitoring and financial reporting	69
3.1.2 Quality of service monitoring	70
3.2 Assessment of airports’ conduct against the review principles	71
3.2.1 Review principles a) and c) — reasonable rate of return.....	71
3.2.2 Review principle b) — the structure of charges.....	77
3.2.2 Review principles d) and e) — quality of service outcomes and commercial negotiation.....	82
3.2.4 Summary of performance of existing light-handed regulation monitoring regime against the Government’s review principles.....	84
4. Future arrangements	87

4.1	Introduction	87
4.2	Alternatives to the current arrangements	87
4.2.1	The Government’s objectives in privatising airports and moving to a ‘lighter-handed’ regulatory regime	88
4.3	Option A: Reliance on Part IIIA	89
4.3.1	Experience with Part IIIA in airports	89
4.3.2	Improving the processes under Part IIIA	90
4.4	Option B: The existing airports monitoring regime—can and should it be ‘improved’?	92
4.4.1	Introduction	92
4.4.2	Existing monitoring arrangements	93
4.4.3	Monitoring with pricing principles	96
4.4.4	Monitoring with thresholds	99
4.4.5	Summary	102
4.5	Summary of potential future arrangements	103
5.	Conclusion.....	105
	Appendixes.....	107
1.	Empirical identification of presence of market power in on-airport car parking	107

Summary

Following the Australian Government's response to the recommendations made by the Productivity Commission (PC) in 2002 on the price regulation of Australia's capital city airports, direct price regulation in the form of price caps and prices notification arrangements was replaced with a system of price and quality of service monitoring. This regime currently applies to Adelaide, Brisbane, Canberra, Darwin, Melbourne, Perth and Sydney airports and is administered by the Australian Competition and Consumer Commission (ACCC). The airports had been privatised a little earlier under long-term concession leases. Under the monitoring regime, the airports are required to provide annual audited regulatory accounts to the ACCC, as well as information on quality of service. The airports are not required to obtain regulatory approval prior to increasing charges and terms and conditions of access are established through negotiated arrangements. As part of the Government's decision, the current PC inquiry was foreshadowed and a set of 'review principles' was released, against which the outcomes of the airports' conduct would be judged in the subsequent review.

The current monitoring arrangements have been described as being an example of 'light-handed' regulation, as compared with traditional 'heavy-handed' regulation, such as price or revenue caps, or rate of return regulation. However, there has not been much public discussion or debate about what is meant by the term 'light-handed', how it operates in practice, and what it is capable of delivering, particularly in the context of monopoly infrastructure. Light-handed regulation is not defined by any single specific regulatory regime or arrangement. Rather it is more appropriate to consider where regulatory options fall along a continuum, determined by the extent to which they exhibit characteristics which are generally considered to be either light or heavy-handed. Such characteristics include the extent to which the regulator attempts to control or monitor the relevant variables, the credibility of increased control being triggered, and the compliance costs of the regime.

Moves to apply 'light-handed' forms of regulation seem to have arisen from a concern that traditional forms of regulation involve high (efficiency) losses associated with regulatory error, as well as high costs of compliance and administration. On the other hand, it appears to have been assumed that 'light-handed' regulation will encourage balanced commercially-negotiated outcomes and efficient levels of investment, be effective in restraining monopoly power, and involve lower costs of compliance to all parties.

This submission attempts to contribute to the public debate about the effectiveness of 'light-handed' monitoring for the regulation of monopoly infrastructure. It draws on the ACCC's experience in administering the airports light-handed system of monitoring, as well as its previous experience in regulating airports and its experience in regulating other monopoly industries.

The submission is structured as follows: section 1 provides a short introduction; section 2 discusses the current regulatory arrangements, including a discussion of the market power of airports, the meaning of, and rationales for, 'light-handed' regulation, and how aeronautical assets should be valued; section 3 discusses the

effectiveness of the current arrangements; and section 4 discusses the future arrangements that could be applied to the monitored airports.

The key points in this submission that the ACCC would like to emphasise are:

- The price-monitored airports possess moderate to high levels of market power.
- Neither the countervailing power of airlines nor the ability of airports to derive non-aeronautical revenues provides an effective constraint on the ability of airports to use their market power.
- The existing light-handed monitoring regime also fails to provide an effective constraint. Critically, the existing monitoring regime does not provide any information on the level of efficient costs, which makes it impossible to determine whether an airport has earned monopoly profits.
- There are two broad options for addressing the exercise of airport market power, given the Government’s objectives for ‘light-handed’ regulation:
 - option A—rely on Part IIIA of the *Trade Practices Act 1974*, while either removing the existing airports-specific monitoring arrangements or retaining them as a complement to Part IIIA
 - option B—attempt to improve the existing airports-specific monitoring arrangements, in order to address the identified deficiencies and enable them to act as a direct constraint on the use of airport market power.
- Reliance on Part IIIA is likely to be reasonably effective in constraining monopoly power. However, it is important for such a dispute resolution mechanism to be both timely and reasonably certain.
 - The amendments proposed to Part IIIA currently before the Parliament seek to improve the timeliness of decision making, as well as provide for increased certainty through the inclusion of pricing principles.
 - In this context, some limited monitoring may provide information to users which increases their ability to negotiate and may also provide useful information to assist the making of decisions under Part IIIA.
- Attempting to improve the existing monitoring arrangements in order to make them effective in constraining monopoly power involves establishing a regime which is able to identify whether market power is abused and a mechanism to re-impose regulation in the event of abuse. This approach is intrinsically problematic.
- Monitoring is likely to be either ‘too light’ to be effective for this task—or, if expanded, represent ‘shadow’ retrospective rate of return regulation which is ‘too heavy’ to be justified and associated with inefficiencies.

The price-monitored airports possess moderate to high levels of market power

The price-monitored airports possess moderate to high levels of market power. This was the finding of the PC in its last inquiry into price regulation of airport services in 2002 and there has been no significant change since then. These levels of market power arise from significant barriers to entry associated with the natural monopoly cost characteristics of the major airports in Australia, combined with the strength of demand and limited supply substitution possibilities for their aeronautical services. These conditions can be expected to continue to prevail for the foreseeable future.

The price-monitored airports possess monopoly power over a range of aeronautical services. This range includes all those services that make up a bundle or package of services which airport users must use if they are to use the airport at all. This includes the services provided by the supply of aircraft movement facilities (runways, taxiways, aprons, aircraft parking, aircraft refuelling, airside grounds, lighting etc), passenger processing facilities (check-in desks, aerobridges, departure lounges etc) and landside vehicle facilities (landside passenger access facilities, car parking, taxi facilities etc). Again, the ACCC considers that very limited change, if any, has occurred in the extent of airports' market power over particular services since the last PC inquiry.

Apart from application of the national third party access regime, there are no effective constraints on the exercise of airports' market power

Apart from the application of Part IIIA of the Trade Practices Act, which provides for a national third party access regime for those facilities that are of national significance and cannot be economically duplicated, there are no effective constraints on the exercise of market power by the price-monitored airports.

Complementarity is acknowledged between the provision of some non-aeronautical services (such as duty-free shops and office space within the terminal) and the provision of aeronautical services, such that a proportion of non-aeronautical revenue would not be generated without aeronautical facilities, and increases in aeronautical traffic generate increases in non-aeronautical revenue. However, this does not act to constrain aeronautical prices to efficient levels or act as a sufficient constraint on the airports' exercise of market power.

The countervailing power of airlines in negotiating terms and conditions of access to the price-monitored airports is low. Whether airlines possess countervailing power depends on whether they can create a credible threat to withdraw from negotiations, or whether they must accept a take-it-or-leave-it offer. The extent to which airlines can create such a credible threat hinges on viable alternatives; these are quite limited in the Australian context.

The existing light-handed monitoring regime fails to provide an effective constraint

The ACCC publishes annual reports on price monitoring and financial accounts, and quality of service. These reports focus on trends over time in indicators, as well as comparison between airports where this is possible. Under its price monitoring role, the ACCC reports on various indicators as measures of prices, costs and profits of aeronautical and aeronautical-related services, as directed by the Government. These indicators are based on the accounting information provided by the airports in their

regulatory accounts as split into aeronautical and non-aeronautical services as defined by regulation. The ACCC does not make any judgements in its monitoring reports as to whether levels of prices are ‘acceptable’ or reflect monopoly profits. The ACCC considers that such judgements are not possible under the existing monitoring arrangements. The ACCC’s monitoring of airports has shown that there were substantial increases in airport charges, asset valuations, and indicators of short-term profitability following the removal of price regulation and the introduction of the current arrangements. The monitoring indicates that there have been no significant changes in quality of service outcomes over the same period.

It is very difficult to interpret higher or lower prices, costs and profits disclosed through a monitoring exercise in terms of whether prices are generating revenue consistent with the long-run costs of efficiently providing aeronautical services.

Firstly, while trends in prices and accounting profits may be indicative, substantially more information estimated for a suitably long period of time, is needed in order to make such an assessment. In particular, information on the efficient long-run costs of providing aeronautical services is required. Without this information, any ‘excess’ returns may be attributable to improved technical efficiency and lower costs rather than (or in addition to) monopoly rents from abuse of market power.

The valuation of aeronautical assets depends on purpose

An important component of deriving the efficient long-run costs is an appropriate value for the cost of aeronautical assets, including land. In the context of the objectives of the review and its guiding principles, the value of aeronautical assets should represent their minimum efficient cost. However, for monitoring purposes, the ACCC reports on the values of the assets that have been recorded in the operators’ audited financial statements, which have included some significant upwards revaluations.

In the context of the current regulatory arrangements applying to airports, in which prices are not regulated and the asset title is a long concession lease, an externally imposed approach for valuing aeronautical assets is not relevant. The current value of an airport’s assets is determined by the capitalised present value of the expected stream of future net proceeds that those assets can generate, including their expectations about the possibility of earning monopoly profits. This is the value to the lease holder, excluding the amount paid for the lease. But this is not directly relevant to the current review, which is required to assess whether prices are generating revenue consistent with the long-run costs of efficiently providing aeronautical services.

In other sectors where the ACCC has a role in regulating the charges of natural monopolies, it is required to determine a regulatory asset base (RAB). The value of the RAB is required to be established independent of future cash flows because it is the regulator’s task to determine the appropriate level of expected costs for setting price or revenue caps.

Whatever approach is taken to the valuation of sunk assets for regulatory purposes, where the decision may rest on practical or policy considerations, it is important to note that this should be a ‘once-off’ decision only. That is, once it is determined what

approach to use to establish a *starting* value for such existing assets, that valuation is adopted for the regulatory period and is not further adjusted except to take into account new investment.

For example, one method that may be used in establishing a starting value for sunk assets is indexed historical cost. Under this approach, the starting values for such assets for the purpose of determining the RAB would be based on their initial historical costs, indexed by a relevant indicator up until the date at which the assets enter the RAB. After that date, there would be no further indexation of such assets, because this would lead to either ‘windfall gains’ or ‘windfall losses’ to the regulated party.

The second main reason that it is very difficult to interpret monitoring results in terms of whether airports are pricing to earn monopoly profits is that monitoring periods are short relative to the long period of the airport leases and, in addition for the present review, there is only a short history of experience with the existing monitoring regime. As a result, any calculation of indicators of ‘excess’ returns over the short period since privatisation is inadequate and potentially misleading. Quite simply, the monitoring data collected do not provide adequate information to justify any assessment about whether the levels of the indicators monitored are at efficient or appropriate levels.

The inability of the existing monitoring arrangements to identify abuses of monopoly power therefore means that they also fail to provide an effective constraint on the monopoly power of the price-monitored airports.

The ability of the airports to use their high levels of market power is more likely than not to result in prices for aeronautical services above efficient levels (and possibly capacity and/or quality which are below optimum levels). The analysis in section 2.1 of this submission contends that the elasticity of demand for airport services (and consequently, the market power of airports) has not changed since the PC’s last inquiry into price regulation of airport services, and is generally low. This is likely to result in significant distributional effects, as well as allocative efficiency consequences.

There are two broad options for future arrangements

Considering the natural monopoly structure of airports, the Government’s objectives, and the experience with, and limitations of, the existing airports-specific monitoring arrangements, there appear to be two broad options for future regulatory arrangements for airports:

- option A—rely on Part IIIA of the Trade Practices Act, while either removing the existing airports-specific monitoring arrangements or retaining them as a complement to Part IIIA
- option B—attempt to improve the existing airports-specific monitoring arrangements, in order to address the identified deficiencies and enable them to act as a direct constraint on the use of airport market power.

Both options have benefits and costs and the ACCC has attempted to draw out the implications of each option in the context of the Government's objectives in privatising the airports and moving to a light-handed regulatory framework.

Reliance on Part IIIA to address concerns about abuse of monopoly power is likely to be reasonably effective in constraining monopoly power, but its effectiveness may be limited by the cost and delay involved in seeking redress through these provisions. It is important for a dispute resolution mechanism that is being relied on as the constraint on the exercise of market power to be both timely and reasonably certain. The amendments proposed to Part IIIA currently before Parliament seek to improve the timeliness of decision making, as well as provide for increased certainty through the inclusion of pricing principles.

There is also an issue of the imbalance in bargaining power and information asymmetry in relying on Part IIIA for airports.

The Part IIIA option could involve either removing the current airports-specific monitoring arrangements, or recognising its inherent limitations. While the existing monitoring information (or a modification of it) is unlikely to provide all the information necessary for making decisions under Part IIIA, it is nevertheless likely to provide some useful information. Such information may also go some way towards addressing the information asymmetries and imbalance in bargaining power between airports and airlines, thereby assisting airlines in their negotiations with airports. Therefore, there may be a case for continuing some monitoring as a complement to Part IIIA. This translates to continuing to require airports to provide the price and quality of service information required under the Airports Act for these purposes.

The option of improving the existing monitoring arrangements in order to provide an effective constraint on the ability of airports to use their market power would need to address the crucial weakness of lack of a clear and credible threat of re-regulation if market power is abused. The two key steps in this process are identification of abuse of monopoly power and a mechanism to re-impose regulation in the event of demonstrable abuse. Unfortunately, this process is intrinsically problematic. Examples of expanded monitoring, such as imposition of pricing principles with monitoring, or establishment of threshold monitoring, appear inadequate and the (limited) experience with them reinforces this. Both examples in effect represent 'shadow' forms of heavier regulation, potentially involving a retrospective rate of return approach. They are likely to impose greater compliance costs and regulatory uncertainty and therefore are likely to be less effective in preventing abuses of monopoly power than some direct forms of regulation.

It is difficult to escape the conclusion that 'light-handed regulation', of which monitoring is the prime example, is either 'too light' to be effective for the task—or, if expanded, 'too heavy' to be justified.

Glossary

ACCC	Australian Competition and Consumer Commission
ACG	The Allen Consulting Group
ACS	Australian Customs Service
ACTO	Australian Cargo Terminal Operators Pty Ltd
AER	Australian Energy Regulator
ATRS	Air Transport Research Society
CAA	United Kingdom Civil Aviation Authority
CBD	central business district
core-regulated airports	Refers to the airports which were subject to economic regulation upon privatisation, as well as Sydney airport. They included Melbourne, Brisbane, Perth, Adelaide, Alice Springs, Canberra, Coolangatta, Darwin, Hobart, Launceston, Townsville and Sydney airports.
CPI	consumer price index
DORC	depreciated optimised replacement cost
DoTARS	Department of Transport and Regional Services
EBITA	earnings before abnormals, interest, tax and amortisation
EBITDA	earnings before abnormals, interest, tax, depreciation and amortisation
ESCV	Essential Services Commission of Victoria
FAC	Federal Airports Corporation
IATA	International Air Transport Association
IBMS	International Business Management Services Pty Ltd
MTOW	maximum take-off weight
NCC	National Competition Council
NECG	Network Economics Consulting Group Pty Ltd

NERA	National Economic Research Associates
NNI	necessary new investment
NZCC	New Zealand Commerce Commission
OAC	operationally agreed capacity
PC	Productivity Commission
PoMC	The Port of Melbourne Corporation
PSA	Prices Surveillance Authority
PSC	passenger service charge
RAB	regulatory asset base
RPT	regular public transport
RRCB	revised regulatory cost base
SPAM	South Pacific Airmotive Ltd
TRL	Transport Research Laboratory
UKCC	United Kingdom Competition Commission
VFR	visiting friends and relatives

1 Introduction

This submission to the inquiry being undertaken by the Productivity Commission (PC), *Price regulation of airport services*, draws on the experience of the Australian Competition and Consumer Commission (ACCC) in administering regulatory arrangements applying to airports, as well as its experience in regulating other industries.

The submission addresses those questions in the PC's issues paper of May 2006 which the ACCC considers that it can contribute to, given its experience and expertise in administering regulatory arrangements.

The submission is structured in three parts:

- Section 2 discusses the current regulatory arrangements applying to airports.
 - It contains a discussion of the economic characteristics of the supply of airport services in Australia, including any changes to the levels of market power since the PC's last inquiry report in 2002.
 - The meaning of the term 'light-handed' regulation is also discussed in this section, including the rationales for the move away from more traditional direct forms of regulation, towards 'light-handed' regimes such as monitoring.
 - The formulation and execution of the current monitoring arrangements are presented, as well as a description of the application of Part IIIA of the *Trade Practices Act 1974* to the monitored airports.
 - The practice of the price-monitored airports in valuing their assets is outlined, as well as a discussion of how aeronautical assets should be valued.
- Section 3 assesses the effectiveness of the current arrangements.
 - It contains a summary of the outcomes of the ACCC's price and quality of service monitoring and then an assessment of the regime against the Government's review principles.
- Section 4 discusses the future arrangements that could be applied to the monitored airports.
 - It contains a discussion of two broad options, given the limitations highlighted earlier in the submission of the current arrangements:
 - option A—rely on Part IIIA of the Trade Practices Act, while either removing the existing airports-specific monitoring arrangements or retaining them as a complement to Part IIIA

— option B—attempt to improve the existing airports-specific monitoring arrangements, in order to address the identified deficiencies and enable them to act as a direct constraint on the use of airport market power.

2 The current regulatory arrangements applying to airports

This section of the ACCC's submission discusses the current regulatory arrangements applying to airports. It contains a discussion of the economic characteristics of the supply of airport services in Australia, including any changes to the levels of market structure and power since the PC's last inquiry report in 2002.¹ The meaning of the term 'light-handed' regulation is also discussed in this section, including the rationales for the move away from more traditional direct forms of regulation, towards 'light-handed' regimes such as monitoring. Finally, the formulation and execution of the current monitoring arrangements are presented, as well as a description of the application of Part IIIA of the Trade Practices Act to the monitored airports.

2.1 Economic characteristics of airports in Australia

2.1.1 Market power of airports in 2002

In its 2002 report, the PC found that the significant barriers to entry associated with the natural monopoly characteristics of the airports, combined with the strength of demand and limited substitution of supply possibilities for airport and air services provide potential for abuse of market power.²

Supply-side factors

The PC found that a number of conditions exist to generate natural monopoly features in the supply of airport services. These include the large fixed and indivisible investment requirements, and therefore the likely economies of scale; significant sunk costs; and economies of scope.

The PC observed that economies of scale are more significant in industries with a relatively high proportion of fixed (indivisible) costs and low marginal costs. This can create a barrier to entry because, unless a potential entrant can capture a significant market share, an incumbent market airport services supplier can expand production at a lower unit variable cost than the potential entrant could: the large 'fixed' costs are sunk for the incumbent but not for the potential entrant. The PC found that economies of scale appeared to be limited to airports with relatively low passenger numbers as the dominant effect of diseconomies of scale for terminal facilities may outweigh the economies of scale associated with the provision of runways at some airports.³

Sunk costs were described by the PC as the costs associated with the investments in facilities that are specific to an industry, firm or location meaning that they cannot, without substantial loss, be moved or sold and used by another party unless that party

¹ Productivity Commission, *Price Regulation of Airport Services*, Report No. 19, 23 January 2002.

² *ibid.*, p. XXII-XXVI.

³ *ibid.*, p. 100.

puts them to the same use. While the PC found that the majority of airport investment such as runways and aprons are immovable sunk cost investments, it described some facilities as having alternative uses. Some airport land is an example. For instance, the development of business parks may show that even though airport leaseholders must continue to provide airport services on their land, some of that land can be used for non-aeronautical purposes.⁴

The PC noted that economies of scope exist if it is less costly to have one firm provide a group of services than to have each service provided separately by a different supplier. This appears to be the case with regard to airports providing aeronautical services, deriving from the lower coordination costs of having one supplier provide access to multiple aeronautical services at the airport.⁵

The PC also highlighted the existence of economies of scale on the demand side arising from the network benefits accruing to airlines and passengers from using one large facility. The PC considered that, by concentrating services at fewer airports, airlines can use larger and more economical aircraft and also benefit from economies of scale in focussing services at one airport in each city. Passengers transferring between flights also benefit from not having to commute to another airport.⁶ This may also be seen as an economy of scope, such as via ‘complexing’ of different air service routes at a single capital city airport.

Demand-side factors

The price elasticity of demand for airport services will be low given the typically low proportion that airport charges make up of airline costs and fares, in addition to the very limited substitution alternatives for using the existing capital city airports. However, this could be mitigated by any potential for destination, modal and airport substitution and the supply responses of other input providers to changes in airport charges. The PC noted that airports that face more significant substitution possibilities will face more price-sensitive demand and hence have lower market power.⁷

The PC considered that the primary purpose of a travel journey is likely to influence the degree of modal substitution. The PC found that leisure travellers are likely to be far more sensitive to price than to time when compared with business travellers. In addition to this, the distance between destinations remains influential since the further the distance between origin and destination the less attractive are alternative modes of travel. For international travel to Australia there is little viable option but to fly.⁸

The PC considered that those major airports in Australia that served predominantly tourist markets (Alice Springs, Coolangatta, Hobart, Launceston and Townsville) were likely to possess a lower degree of market power (relative to other major

⁴ *ibid.*, pp. 101-102.

⁵ *ibid.*, pp. 102-104.

⁶ *ibid.*, p. 104.

⁷ *ibid.*, p. 132.

⁸ *ibid.*, p. 116.

airports) because of the high degree of destination substitution options. These airports also appeared to face effective competition from other airports in proximate locations.⁹ In contrast, the PC considered that Brisbane, Melbourne, Perth and Sydney airports possessed substantial market power due to their high proportion of business and ‘visiting friends and relatives’ (VFR) travellers. These airports also did not face significant competition for domestic passenger traffic from other airports.¹⁰

The PC considered that Perth airport’s isolation was a source of significant market power evidenced by the very high proportion of visitors travelling to Western Australia by plane. While Darwin airport’s use as a major air entry point for the Northern Territory was considered significant, its dominant market segment was holiday travel and as such it was considered to face a potentially significant degree of destination substitution.¹¹

For Adelaide airport, the PC found that although a large proportion of visitors to South Australia were for business and VFR purposes, a large majority of visitors travelled from New South Wales and Victoria. Given that the majority of visitors from these States arrived by surface transport, the degree of modal substitution may not be insignificant.¹² Similarly, while the majority of Canberra visitors travelled there for business or VFR purposes, a large proportion of visitors to Canberra arrived by private car.¹³

In sum, the PC found that Brisbane, Melbourne, Perth and Sydney airports possessed substantial market power while Adelaide and to a lesser extent Canberra and Darwin airports possessed moderate degrees of market power.¹⁴

Market power in providing particular services

The PC observed that the market power of an airport depends on its market power in providing particular airport services. In assessing the market power of an airport providing a particular airport service, the PC highlighted the distinction between location and monopoly rents. While monopoly profits result in a loss of efficiency caused by a distortion in supply and demand, location rents do not and represent ‘returns accruing to a scarce factor rather than returns deriving from the exercise of market power as such’.¹⁵

The PC considered that airports hold a substantial degree of market power in the provision of aircraft movement facilities, passenger movement facilities, vehicle

⁹ *ibid.*, p. 133.

¹⁰ *ibid.*, p. 134.

¹¹ *ibid.*, p. 136.

¹² *ibid.*

¹³ *ibid.*, p. 137.

¹⁴ *ibid.*, p. XVI.

¹⁵ *ibid.*, p. 146.

access facilities and aircraft refuelling. The PC considered that airports had a moderate degree of market power in the provision of car parking, taxi facilities, and aircraft light and emergency maintenance sites. But in these latter markets airports had a locational advantage which would be reflected in their supply prices 'on airport'.

2.1.2 Changes in market power of airports since 2002

In its issues paper (p. 21), the PC asks

Since the Commission's 2002 inquiry, have there been reductions in the overall market power enjoyed by any of the seven price monitored airports ... and if so why? For example, has recent development of Avalon and Gold Coast Airports reduced the market power of Melbourne and Brisbane Airports? What are the implications for future assessments of market power at the price monitored or other airports of the analysis by the Australian Competition Tribunal (2005) underpinning its declaration under Part IIIA of airside services at Sydney Airport?

In order to comment on this question, the discussion below outlines some changes that have occurred since the PC's 2002 report which could affect the levels of airport market power; in particular, changes to supply and demand-side substitution.

Supply-side factors

The natural monopoly characteristics associated with the provision of airport services described by the PC in 2002 have not changed. However, the question of whether other airports can supply airport services as alternatives to the price-monitored airports is important given the potential moderating effect this would have on market power.

There have been minimal changes to the runway and terminal capacity at most non-price-monitored airports in Australia. However, the opening of Avalon airport has provided an alternative supply for airport services in Melbourne.

On 1 June 2004, Avalon airport, located 55 kilometres from Melbourne's central business district (CBD), commenced serving passenger flights. It currently caters for the operation of 134 weekly flights totalling over 23 700 seats to Sydney, Brisbane, Adelaide and Perth. Avalon airport features a 3048 metre runway and associated infrastructure capable of landing B747 and larger aircraft.¹⁶ On 8 May 2006 Avalon airport carried its one millionth passenger.¹⁷ While some of these passengers may have otherwise used Melbourne airport, a proportion have been first-time travellers.

The Australian Competition Tribunal (the Tribunal), in its decision on the application for declaration under Part IIIA of the Trade Practices Act of the airside service at Sydney airport ('the Sydney airport case'), considered that Melbourne airport was 'operating in a competitive market' because of the commercial negotiation experiences of an airline.¹⁸

¹⁶ Linfox, Avalon Airport Brochure, viewed 5 July 2006 <<http://www.linfox.com/NR/rdonlyres/4A7B98B5-DEF3-48C6-B1569D47F7685864/0/AvalonBrochureWeb.pdf>>

¹⁷ Avalon Airport, Jetstar media release, *Avalon Airport and Jetstar reach 1 million passengers*, 8 May 2006.

¹⁸ Virgin Blue Airlines Pty Ltd [2005] ACompT 5, para. 391-393.

However, while the existence of Avalon airport may constrain the market power of Melbourne airport to some degree, it does not appear that this constraint is significant. As noted in the PC's 2002 report and referred to in section 2.1.1 of this submission, there are particularly important network benefits that accrue to both airlines and their passengers from airlines concentrating their services at one location in each capital city. In practice, Avalon airport appears to provide only limited supply-side substitutability for a segment of the market. It may also be adopted by an airline to differentiate itself for selected routes (such as MEL-SYD) from its parent company.

Given Avalon airport's location and the travel time between it and the CBD, it is unlikely to be a close substitute to Melbourne airport for business travellers. The majority of passengers using Avalon airport are domestic leisure travellers,¹⁹ whereas the majority using Melbourne airport are business or VFR travellers and all international passengers. These passenger segments tend to have more price inelastic demand than leisure travellers and they are also more significant users of air travel.²⁰ Avalon airport also has an apron/aircraft parking capacity constraint of three jet aircraft at any one time.²¹

These factors suggest that Avalon airport's ability to compete with Melbourne airport is limited to the provision of airport services for tourist travellers, with their associated higher elasticity of demand and destination substitution. For the bulk of Melbourne airport's traffic, Avalon airport does not provide a competitive constraint. This circumstance also prevails for the bargaining position of the airlines in their commercial negotiations with Melbourne airport. Therefore, although Melbourne airport's ability to exercise its market power may be slightly diminished by the entry and development of Avalon airport, the level of Melbourne airport's market power would appear to still be high.

Demand-side factors

Trip purpose can affect the price elasticity of demand for travel and shape substitution possibilities, which in turn may affect the degree of market power held by individual airports. Therefore, the ACCC examined whether there appears to have been any change in the primary purpose of a travel journey to the price-monitored airports since the last PC inquiry.

The PC in its 2001 review used a variety of sources to calculate the proportion of interstate visitors that travelled for business, VFR and holiday purposes. The PC concluded from these data that substitution possibilities and hence demand elasticities

¹⁹ This is supported by National Visitor Survey information, which suggests that the number of interstate leisure visitors to the Great Ocean Road region travelling by air increased by 35 per cent in the year ending March 2005 and research conducted by Jetstar suggests that one in three passengers using Avalon airport visited the Great Ocean Road. See Tourism Victoria, Annual Report, 2004-05, p. 35.

²⁰ Productivity Commission, 2002, op. cit., p. 134.

²¹ Avalon Airport, Jetstar media release, *Avalon Airport and Jetstar reach 1 million passengers*, 8 May 2006.

for destinations such as Adelaide, Brisbane, Canberra, Melbourne, Perth and Sydney will be lower than for the other destinations considered.²²

The following tables have been created using Tourism Australia data collected as part of the National Visitor Survey. For domestic visitors, the figures represent those that have travelled to the nominated city using air travel. Therefore, figures for Melbourne and Brisbane include air travellers to Avalon and Coolangatta airports respectively and may also include visitors that have landed at general aviation airports.

Table 2.1 Reason for domestic air travel to Australian capital cities²³

CITY	Business		VFR		Holiday	
	2001	2005	2001	2005	2001	2005
Sydney	53%	52%	20%	24%	24%	20%
Melbourne	54%	48%	22%	27%	22%	23%
Brisbane	36%	33%	22%	27%	38%	37%
Adelaide	56%	49%	22%	29%	16%	13%
Perth	49%	42%	23%	31%	24%	21%
Canberra	56%	64%	27%	25%	14%	8%
Darwin	44%	37%	11%	17%	43%	40%

Source: Tourism Australia, National Visitor Survey, 2004–05.

Table 2.1 shows that little change has occurred over the period from 2001 to 2005 in respect of the reasons for domestic air travel. In particular, business air travellers who are associated with relatively inelastic demand continue to make up a significant proportion of air travellers at most airports. This is especially the case for Canberra, to where almost two-thirds (64 per cent) of domestic air passengers travelled for business purposes. All of the price-monitored airports had a majority of domestic travellers in the combined business/VFR category, which is associated with lower price sensitivity than holiday travellers.²⁴

Canberra and Adelaide have relatively low proportions (less than one in seven) of domestic holiday air travellers and the proportions fell between 2001 and 2005.

The PC, using Bureau of Tourism Research data, found that international travellers primarily come to Australia for a holiday, which may mean they are a more price sensitive group than domestic air travellers as a whole. However, the PC considered that the fact that international visitors have little choice but to fly to Australia may reduce their price elasticity of demand for air travel.

²² Productivity Commission, 2002, op. cit., p. 113.

²³ Figures for Melbourne and Brisbane include travellers using both Avalon and Coolangatta airports respectively as travellers using these secondary airports cannot be separated out by the survey. This data includes both overnight and domestic daytrips. Columns add to less than 100 per cent because the 'other' reason for travel has not been included in this table. The shaded cells in the table suggest destinations for which price elasticity of air services to, and airport services at, are likely to have decreased.

²⁴ Productivity Commission, 2002, op. cit., pp. 110-112.

Table 2.2 Reason for international air travel to Australian airports²⁵

CITY	Business		VFR		Holiday	
	2001	2005	2001	2005	2001	2005
Sydney	17%	17%	20%	21%	51%	51%
Melbourne	19%	20%	29%	26%	41%	42%
Brisbane	9%	10%	18%	21%	66%	61%
Perth	10%	12%	27%	27%	54%	51%
Adelaide	13%	10%	32%	34%	40%	41%
Darwin	5%	15%	10%	10%	63%	59%

Source: Tourism Australia, National Visitor Survey, 2004–05.

Table 2.2 shows that little change has occurred in the reason for travel between 2001 and 2005. The majority of international visitors continue to travel through Australian airports for holiday purposes. Conversely, business travellers to most price-monitored airports represented the smallest proportion of international air travellers.

In coming to a conclusion on the overall degree of market power, one of the inputs the PC used was the main market segment to destination for domestic travel. It found that, apart from Darwin airport, business/VFR was the main market segment. This contributed to the PC's finding that Darwin airport had a low/moderate degree of market power. From the data examined by the ACCC, it appears that Darwin airport also has business/VFR as the main market segment, which may strengthen the overall degree of market power held by Darwin airport.

Summary of changes to levels of market power held by airports

The ACCC considers that minimal change has occurred to the levels of market power held by the price-monitored airports since the last PC inquiry. On the supply side, the entry of Avalon airport may have slightly diminished Melbourne airport's ability to exercise market power, but only to a very limited degree. On the demand side, in terms of the main reason for travel to particular airports, data examined by the ACCC is broadly consistent with that used by the PC. One difference is that this data shows the main reason for domestic travel to Darwin airport is business/VFR, in common with the other price-monitored airports, whereas the PC considered that domestic travel to Darwin was predominantly for holiday/leisure. The data considered by the ACCC would suggest a greater degree of market power held by Darwin airport.

Market power in providing particular services

In its issues paper (p. 24), the PC asks

Has the market power enjoyed by the major airports in the delivery of particular services changed since the current arrangements were put in place? Does this suggest a need to alter the range of price monitored services?

In the case of car parking, is there evidence that airports have used market power to raise prices to an excessive extent? Could relatively high charges for parking simply reflect 'location rents' that accrue from the advantages for airport users of being able to park close to the airport terminals?

²⁵ Tourism Australia, op. cit. Columns add to less than 100 per cent because the 'other' reason for travel has not been included in this table.

Are there any in-principle reasons why fuel throughput levies should be excluded from the purview of a future price monitoring regime?

The ACCC considers that very limited change has occurred in the structural market conditions under which the price-monitored airports supply aeronautical services since the last PC inquiry. There remains a bundle or package of services which airport users must use if they are to use the airport at all. For this reason, the ACCC is of the view that any future airports-specific regulatory arrangements should take into account all such complementary services in the package of facilities necessary to efficiently provide air transport services.

Landside access and services

The PC considered that, overall, airports appeared unlikely to have significant market power in long-term car parking because of substitution possibilities. It found that market power was likely to be higher for short-term parking and staff parking, but factors mitigated the extent of market power in these facilities. These factors included the constraining effect on short-term rates of long-term parking rates and the ability of non-passenger users of car parks to choose not to use the car park.²⁶ The PC considered that, 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’. However, in relation to car parking, the PC did acknowledge that the airport’s control over landside access may allow it to influence competition from alternatives to use of the airport car park.²⁷

The PC also considered that high airport car parking charges may reflect locational more than monopoly rents; that is, the value placed by consumers on the time and convenience of on-airport parking relative to off-airport, rather than scarcity (and higher parking charges) created by the airport operator. It considered that profits earned from providing space for non-aeronautical facilities will be locational rents, provided that airports do not artificially constrain the provision of such space.²⁸

As discussed in the ACCC’s submission to the PC’s earlier inquiry,²⁹ it is useful to think in terms of an overall market for landside passenger access. All passengers require landside access—it is non-discretionary; it is an essential complementary part of a passenger’s air journey. While passengers may use different forms of transport to access the airport; for example, by taxi, by car (either driving and parking in the airport car park or being dropped off by friends or relatives), bus or train, airports generally have a monopoly position in relation to these alternatives. Airport operators

²⁶ Security provisions at airports, especially temporary use of access roads by vehicles, is likely to have increased since the PC’s 2002 report; this has severely limited the vehicle standing, especially for pick-up of disembarking passengers and thereby increased the demand for the use of car parking, especially on-airport.

²⁷ Productivity Commission, 2002, op. cit., pp. 155-162.

²⁸ *ibid.*, p. 158.

²⁹ Australian Competition and Consumer Commission, *Submission to the Productivity Commission’s Inquiry into Price Regulation of Airport Services*, May 2001, p. 89.

control their landside access as a ‘bottleneck facility’. For example, airports may impose charges on buses servicing off-site car parks, levy charges on taxis and where an airport is serviced by rail (such as in Sydney and Brisbane), there may be scope for the introduction of an access levy. This highlights that airport operators have a monopoly position in the final stage of land access at the airport.

Therefore, the PC’s view that the market power in relation to one of these alternatives (on-airport vehicle parking) is likely to be constrained as long as the conditions for accessing the other alternatives are ‘reasonable’ does not recognise that the airport controls the conditions of access to all alternatives. The airport therefore has market power in relation to all alternatives for landside passenger access and hence in the overall market for airport landside access. Moreover, given that those seeking access to the airport (passengers and non-passengers) differ considerably in the value they place on the time savings and higher convenience of one mode over another, airport operators are in a position to use their market power in the access market to exploit these differences across modes. They may do this by applying discriminatory land access pricing, including charges for on-airport car parking; for example, for taxis, buses, and private vehicles; the latter by short and long-term parking, and possibly stopping.

The car parking ‘sub-market’ for access is where there is the closest competition from off-airport providers, although at the implicit cost of higher time and lower convenience. It is in this sub-market that differences between on and off-airport parking charges reflect pure locational advantage and possibly in addition application of market power by the airport operator.

The presence of actual abuse of market power could be explored in two main ways: basically from the ‘bottom up’ or the ‘top down’. The first is at the level of the prices for on and off-airport car parking that are observed in the market. The difference in these prices may be attributed to two factors:

- the difference in the location of the (otherwise ‘equivalent’) parking spaces (relative to the airport terminal)
- the airport’s application of its market power.

The second way is at the level of company profit outcomes associated with car parking. Both ways pose empirical challenges and some brief comments on each are noted below.

With regard to using the observed prices for on and off-airport car parking, the methodology is to attempt to isolate the price difference that would be attributable to locational advantage alone (as would emerge in a competitive market for both on and off-airport car parking), and to compare that with the observed price difference. Any residual difference would be assessed for attribution to the exercise of market power. An outline of a possible approach to this estimation is presented in Appendix 1.

With regard to examining the profitability of an airport’s car parking business, the difficulties are the usual ones for external assessment of profitability performance of a multi-product enterprise, including the comprehensiveness and pertinence of the data that are available. But, to the extent that car parking land valuation as a capital

expense does not reflect market locational rents, and of course where operating margins do not include these, measures of parking business margins will be incomplete in capturing (and typically overestimate) any monopoly rents. That said, these margins, and especially trends in them, are still of some interest.

As part of its monitoring responsibilities, the ACCC has attempted to track components of on-airport car parking margins. The results of the ACCC's monitoring of average revenue per passenger from aeronautical-related services, a large proportion of which consists of car parking fees, show in general a trend of increasing prices over the three years of monitoring. Over the three-year period, the increase has ranged from 1.6 per cent at Adelaide to 10 per cent at Perth, while decreasing by 3.5 per cent at Darwin.³⁰

Table 2.3 shows the revenues, operating costs and operating margins relating to public and staff car parking provided by the price-monitored airports over the three-year period of the current arrangements.

Table 2.3 Revenues, operating costs and operating margins of airport car parking services

Airport	Car park spaces (2005)	Revenues (\$'000)			Operating ^(a) costs (\$'000)			Operating ^(a) margins (\$'000)		
		2002–03	2003–04	2004–05	2002–03	2003–04	2004–05	2002–03	2003–04	2004–05
Adelaide	1 265	5 844	6 308	6 886	2 145	2 086	2 023	3 699	4 222	4 863
Brisbane	7 837 ^(d)	20 972	25 289	29 392	4 368	4 694	7 224	16 604	20 596	22 168
Canberra ^(b)	1 219	2 490	3 190	3 693	267	1 575	2 114	2 223	1 615	1 579 ^(d)
Darwin ^(c)	745	1 689	1 792	1 998	368	391	293	1 321	1 401	1 705
Melbourne	11 712	36 272	42 868	49 219	12 461	9 248	10 666	23 811	33 620	38 553
Perth	3 653	9 249	10 686	12 932	2 526	2 983	3 811	6 723	7 703	9 121
Sydney	10 168	48 780	54 364	59 636	14 979	14 845	14 551	33 801	39 519	45 085
Total	36 282	125 296	144 497	163 756	37 114	35 822	40 682	88 182	108 676	123 074

Source: ACCC, *Price monitoring and financial reporting—price-monitored airports 2004–05* and *Quality of service—price-monitored airports 2004–05*.

- (a) 'operating' costs do not include interest or tax expenses, but do include depreciation and amortisation (but not amortisation of lease premium)
- (b) Canberra's costs include interest expenses but do not include amortisation
- (c) Darwin's costs do not include interest, tax, depreciation or amortisation
- (d) The figure reported here differs from that reported in the quality of service report, which was reported in error

The results in Table 2.3 show that the price-monitored airports derive substantial revenue and operating margins from car parking services and this has generally been increasing over time. The costs relating to the provision of car parking services are

³⁰ Australian Competition and Consumer Commission, *Price monitoring and financial reporting—price-monitored airports 2004–05*, p. 16.

generally relatively stable. It was noted in the ACCC's 2004–05 price monitoring report that, in the case of Brisbane airport, since 2002–03, public and staff car parking has accounted for between 40 and 48 per cent of Brisbane's total margin (i.e. the sum of the aeronautical and aeronautical-related operating margins). The total car parking margins earned by the price-monitored airports as a proportion of car parking revenues increased from 70 per cent in 2002–03 to 75 per cent in 2004–05. On a per parking space basis, in 2004–05, operating margin per car park space at airports ranged from \$1295 at Canberra to \$4434 at Sydney.

It should be noted that the operating cost (and hence margin) measures generally do not include full allowance for capital costs (nor tax and interest). Full cost margins will be less than the levels shown in Table 2.3. In addition, as noted above, on-airport car parking prices (and hence revenues) include an efficient price 'premium' for locational advantage or 'location rent' (as would emerge if a competitive market 'on airport' were to exist). Therefore, whether any rents derived from car parking services are due to a mix of monopoly rents and location rents cannot be determined from such airport financial accounts data.

As noted in the ACCC's submission to the 2002 PC review, while conceptually it may be possible to separate the two elements, in practice empirical separation may be difficult.³¹ However, the price difference approach noted above and outlined in Appendix 1 may enable some order of magnitudes of the location rent component to be estimated and be used to gauge the likelihood of airport monopoly rents in car parking.

Aircraft refuelling

The PC found that the market power of an airport over aircraft refuelling services was dependant on the available off-airport alternatives and the ability of airlines to substitute refuelling at other airports. For larger airports including Sydney, Brisbane and Perth, there appeared to be limited off-airport alternatives and the viability of airport substitution was lower due to the greater proportion of long-haul flights arriving and departing at these airports. The PC concluded that airports that have market power are likely to have at least a moderate degree of market power in the provision of aircraft refuelling services and that the extent of market power is likely to be highest for Perth and, to a lesser extent, Brisbane and Sydney airports.³²

The inclusion of aircraft refuelling services within the definition of 'aeronautical services' for the purposes of the ACCC's monitoring (in direction 27) follows the conclusion of the PC that aircraft refuelling services are associated with moderate to high degrees of market power and that there is potential for abuse of market power in the provision of refuelling services.³³ However, clause 3 of direction 27 excludes from the definition of 'aeronautical services' 'the provision of a service, which, on the

³¹ ACCC 2001, op. cit., p. 88.

³² Productivity Commission, 2002, op. cit., pp. 166-168. The PC considered that the isolation of Perth, the high proportion of Brisbane's traffic that is generated on longer routes, and Sydney's status as a 'quasi-hub', was likely to grant these airports relatively high degrees of market power in refuelling.

³³ *ibid.*, pp. 166-170, 179.

date the airport lease was granted, was the subject of a contract, lease, licence, or authority given under the common seal of the Federal Airports Corporation’.

The effect of this clause is to exclude services which are functionally aeronautical and in the supply of which airports have market power. In particular, Perth, Brisbane and Sydney airports rely on this clause to withhold information relating to each airport’s fuel throughput levy. While the Department of Transport and Regional Services (DoTARS) provided guidance on the scope of this exclusion in May 2003, requiring an airport to substantiate that the contract is ‘substantially’ the same as the original contract, the ACCC’s experience is that application of this test is difficult in practice.

The ACCC considers that any future price monitoring arrangements should be based on all those services in which airports possess market power, rather than on distinctions which rely on the legal form of provision. This would include aircraft refuelling services.

2.1.3 Constraints on market power

In its issues paper (pp. 17, 21) the PC asks the following questions relevant to constraints on the levels of market power held by the price-monitored airports:

Are higher returns earned on non-aeronautical assets suggestive that the price monitoring regime has tempered the exercise of market power for the monitored services? Or does the greater measured profitability of non-aeronautical services reflect other factors such as locational rents? Has generally strong growth in non-aeronautical revenues and higher returns on those services of itself encouraged restraint in charges for aeronautical services?

In the light of recent experience, how much weight should now be given to the argument that even if airports have market power, their use of this power to raise aeronautical charges will be constrained by a competing incentive to maximise usage of their facilities, and thereby boost non-aeronautical revenues?

Does the information from the price monitoring process assist commercial negotiations between airports and their customers?

Is price monitoring providing a worthwhile constraint on aeronautical charges at the major airports and should it be continued?

These issues are considered in turn below.

Additional non-aeronautical revenues as a constraint on aeronautical pricing

The PC considered that the potential higher returns from non-aeronautical services (including retailing, car parking and restaurants) provide airports with an incentive to encourage extra passengers to the airport and therefore act to temper increases in aeronautical prices. It considered that the magnitude of the scope for passenger-related non-aeronautical earnings suggested that the restraining effects on aeronautical prices would be significant.³⁴

The PC compared revenues from non-aeronautical activities with aeronautical revenues at core-regulated airports for 1999–00. Earnings before abnormal, interest, tax, depreciation and amortisation (EBITDA) was used for this measure. The 1999–00

³⁴ *ibid.*, p. 188.

results for price-monitored airports are replicated here at Table 2.4, but using passenger numbers from the ACCC’s monitoring reports. Also included is the proportion of total EBITDA that is attributable to non-aeronautical revenues. The PC highlighted that non-aeronautical earnings in 1999–00 exceeded aeronautical earnings by a significant margin.

Table 2.4 EBITDA for the price-monitored airports in 1999–00 for aeronautical and non-aeronautical services

Airport	Passenger movements '000	EBITDA \$'000		EBITDA per pax \$'000		Total	Proportion
		Aero	Non-aero	Aero	Non-aero		
Sydney	24 318	40 703	147 010	1.67	6.05	7.72	78%
Melbourne	15 571	30 239	89 967	1.94	5.78	7.72	75%
Brisbane	11 201	15 178	75 873	1.36	6.77	8.13	83%
Perth	5 155	8 293	37 231	1.61	7.22	8.83	82%
Adelaide	4 285	3 487	30 518	0.81	7.12	7.94	90%
Canberra	1 980	1 122	5 119	0.57	2.59	3.15	82%
Darwin	n/a ^(a)	306	4 387	n/a	n/a	n/a	93% ^(b)

Source: ACCC, *Price monitoring and financial reporting—price-monitored airports 2004–05*.

- (a) Passenger numbers were not provided by the airport operator due to non-provision by the airlines and confidentiality requirements
- (b) Total non-aeronautical EBITDA as a proportion of total airport EBITDA

The PC stated that ‘non-aeronautical profits will moderate stand-alone profit-maximising aeronautical prices only if such profits are strongly linked to aeronautical throughput and if such throughput is responsive to (effective) price reductions’.³⁵ The PC found that these conditions existed as evidenced by airports offering incentives to airlines to encourage additional services at the margin and the finding that a substantial proportion of non-aeronautical revenue is directly linked to passenger throughput.

The PC stated that, provided profits from non-aeronautical services reflect locational rents rather than monopoly profits (which will be the case if airports do not artificially constrain the provision of space for non-aeronautical facilities), economic efficiency will be enhanced by such pricing.³⁶

In the ACCC’s submission in response to the PC’s 2001 draft report,³⁷ the ACCC disagreed with the PC’s conclusions on the constraining effect of non-aeronautical profits. The ACCC commissioned the Network Economics Consulting Group Pty Ltd (NECG) to consider this issue. NECG considered that

... as a general matter, the extent of the tempering effect will depend on the pattern of cross-price elasticities, as well as on the absolute area under the respective demand curves

³⁵ *ibid.*, p. 187.

³⁶ *ibid.*, p. 183.

³⁷ ACCC 2001, *op. cit.*, pp. 8-9.

(for aeronautical and non-aeronautical services). On standard assumptions, it seems difficult to believe that the amount that could be lost in non-aeronautical revenues from price rises for aeronautical services towards the stand-alone monopoly level could be such as to induce price moderation. In effect, this would seem to require: (1) that the infra-marginal profit (the monopoly rent added to the normal profit) on aeronautical services must be less than that available from non-aeronautical services; and (2) that passenger numbers are very significantly affected by consumer prices for airline services (which in turn are affected by airport aeronautical charges). The first assumption seems implausible if there are better substitutes for non-aeronautical services than for aeronautical services, as must surely be the case; [footnote: If this were not the case, then the argument simply says that the airport has and uses substantial market power in non-aeronautical services. ...] the second seems unlikely other than at price extremes.

...

Accordingly, the PC's conclusion that airports will have an incentive to reduce the prices of aeronautical activities below the stand-alone profit maximising level does not appear to be robust.³⁸

The Tribunal in the Sydney airport case also considered this issue. It found that Sydney airport's ability to derive non-aeronautical revenues does not operate as a sufficient constraint on its monopoly power.

The Tribunal stated that, while all the economic experts in the case accepted that the existence of non-aeronautical revenues would cause Sydney airport to set aeronautical charges lower than would be the case if it did not receive non-aeronautical revenues, there was general agreement that the constraining effect of non-aeronautical revenues was not significant. It was apparent from the modelling carried out by the economic experts that the profit-maximising aeronautical price was significantly above the level of current charges.³⁹

In addition, recent economic literature and analysis by Czerny shows 'that simultaneous profit maximization in fact raises aeronautical charges ... and reduces charges for commercial services...'.⁴⁰ Czerny goes on to argue that

Because all real airports are regulated in some way it is difficult to verify empirically that a monopolistic airport reduces commercial charges in order to raise charges for aeronautical services. However, current experience with Australian airports provides some support for this result. After loosening price-cap regulation of Australian airports in 2001, some of them have even doubled aeronautical charges (Forsyth, 2004, p.5). This confirms that airports have a strong incentive to raise aeronautical charges in spite [of] the fact that this might have negative effects on revenues from commercial activities.⁴¹

Table 2.5 shows EBITDA for the price-monitored airports for 2004–05 and the proportion of total EBITDA that is attributable to non-aeronautical revenues.

³⁸ negc, *Productivity Commission's draft report on price regulation of airport services Comments on New Zealand experience and incentives for monopoly pricing*, October 2001, pp. 13-14.

³⁹ Virgin Blue Airlines Pty Ltd [2005] ACompT 5, para. 510-511.

⁴⁰ A Czerny, 'Price-cap regulation of airports: single-till versus dual-till', *Journal of Regulatory Economics*, Volume 30, Issue 1, 2006, p. 90.

⁴¹ *ibid.*, p. 91.

Table 2.5 EBITDA for the price-monitored airports in 2004–05 for aeronautical and non-aeronautical services

Airport	Passenger movements '000	EBITDA \$'000		EBITDA \$ per pax		Total	Proportion
		Aero	Non-aero	Aero	Non-aero		
Sydney	28 848	223 816	287 886	7.76	9.98	17.74	56%
Melbourne	20 776	81 838	143 115	3.94	6.89	10.83	64%
Brisbane	15 884	44 610	117 162	2.81	7.38	10.18	72%
Perth	6 655	25 401	51 622	3.82	7.76	11.57	67%
Adelaide	5 413	17 805	22 568	3.29	4.17	7.46	56%
Canberra	2 484	11 154	28 232	4.49	11.37	15.86	72%
Darwin	1 386	10 210	2 823	7.37	2.04	9.41	22%

Source: ACCC, *Price monitoring and financial reporting—price-monitored airports 2004–05*.

Tables 2.4 and 2.5 show that, since 1999–00, the degree to which non-aeronautical earnings exceed aeronautical margins and the proportion of total earnings made up by non-aeronautical earnings has reduced considerably. Therefore, in terms of the PC's reasoning, the constraining effect of non-aeronautical revenues will be reduced. In addition, much of the growth in non-aeronautical revenues at some airports has been in activities which are unrelated to passenger numbers, such as direct factory outlets, warehouses, and office space. This puts in better perspective and also weakens any applicable tempering effect.

Countervailing power of airlines

The PC described countervailing power as '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'.⁴² The PC considered that the countervailing power of airlines at the major capital city airports appeared to be limited.

However, the PC considered that some airlines had a degree of countervailing power at those airports where there is scope for airport substitution, where airlines form alliances and bargain as a group, or where selective threats can be made to reduce services that are highly profitable to airports.⁴³ Also, the PC considered that the reduction in demand for airport services since September 2001 was likely to have enhanced airline countervailing power. The PC considered that the reduction in Ansett services since that airline was placed in administration had left Australian airports generally more reliant on Qantas' business.⁴⁴

The Tribunal in the Sydney airport case considered that the issue of whether airlines had countervailing power was best approached by asking the question 'whether a party can create a credible threat to withdraw from negotiations or whether the party must accept a take-it-or-leave-it offer'.⁴⁵ It considered that

⁴² Productivity Commission, 2002, op. cit., p. 190.

⁴³ *ibid.*, p. 197.

⁴⁴ *ibid.*, p. 196.

⁴⁵ Virgin Blue Airlines Pty Ltd [2005] ACompT 5, para. 484.

Qantas and Virgin Blue's bargaining power in relation to resisting any increase in charges, whether justifiable or otherwise, is extremely limited because they have no alternative avenues open to them other than to use Sydney Airport.⁴⁶

The Tribunal also considered that

Qantas and Virgin Blue's ability to exercise countervailing power is not enhanced by them joining together as they have different interests in relation to the charges and terms and conditions imposed by SACL.⁴⁷

...

The final result is that any countervailing power the airlines have is limited to legal proceedings, media campaigns and lobbying for regulation. We see these as relatively weak bases of countervailing power which are generally related to, and dependent upon, the regulatory environment.⁴⁸

To the extent that the development of secondary airports in capital cities, such as Avalon airport, may provide viable alternatives to airlines, such airlines may have a degree of countervailing power at the major city airport. The Tribunal heard evidence that

following Jetstar's announcement that it was operating from Avalon, Melbourne Airport had been "more than willing to offer significantly better terms to Jetstar for use of either the DET [Domestic Express Terminal] or the South Terminal at Melbourne Airport."⁴⁹

This demonstrates that it is only where airlines have a viable alternative (and possibly actually use that alternative) that they will have countervailing power. As discussed above, the effect of Avalon airport on Melbourne airport's overall operations is minimal.

Light-handed regulation

The PC stated that

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.⁵⁰

As the PC recognised,

to ensure that market power is not abused, lower levels of regulatory intervention in price setting must be balanced by a credible threat that abuse of market power can and will be identified and appropriate action taken.

⁴⁶ *ibid.*, para. 485.

⁴⁷ *ibid.*, para. 494.

⁴⁸ *ibid.*, para. 498.

⁴⁹ *ibid.*, para. 391.

⁵⁰ Productivity Commission, 2002, *op. cit.*, p. 315.

Therefore, in order to achieve the appropriate balance, key issues in the design of a price monitoring regime are specification of:

- the information to be disclosed (to assist in determining whether market power has been abused and also to promote informed commercial relationships); and
- the nature of the ‘threat’ or over-arching constraint on abuse of market power, including in what circumstances action can be taken and the form that action will take.

If these elements are not clearly spelt out, there is a risk that light-handed regulation could become ineffective or, indeed, as intrusive as stricter price controls.

The PC quoted from a submission from Professor Forsyth, who noted, in the context of New Zealand airports regulation, that light-handed regulation would 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 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)⁵¹

While the PC recognised that the potential for inefficiencies may be alleviated to some extent by defining the behaviour on the part of the airports that would trigger re-regulation, it considered that a broad set of principles for guiding efficient behaviour was preferable.

This consideration was based on the difficulties involved in clearly defining such behaviour. For example, high prices may signal that new investment is required, costs have increased, previous prices were too low or that there are capacity constraints, rather than that monopoly prices are being charged; and high profits may reflect entrepreneurial skills rather than market power. The PC also considered that specific criteria may encourage strategic behaviour.

The PC considered that a review conducted at the conclusion of the monitoring period could assess whether re-regulation was required and that information collected through monitoring could form part of that assessment.⁵²

The Government accepted the recommendations of the PC and put in place monitoring arrangements for a period of five years, with a review to be conducted towards the end of the five-year period. The review would assess the conduct of the airport operators against a set of ‘review principles’.

The Tribunal in the Sydney airport case considered the impact of these arrangements on the ability of Sydney airport to exercise its market power. The Tribunal considered that any threat of re-regulation is quite limited. It was not satisfied that the threat of re-regulation has acted as a constraint or would act as a future constraint. It also noted

⁵¹ *ibid.*, pp. 323-4.

⁵² *ibid.*, p. 324.

that even if regulation was re-introduced, it could not operate retrospectively and would therefore allow Sydney airport to retain any excess returns earned prior to the re-introduction of regulation.⁵³

ACCC's views on effectiveness of existing regime as a constraint on market power

The ACCC does not consider that the existing light-handed monitoring regime can provide a significant constraint on aeronautical charges at the price-monitored airports.

In order for price monitoring to constrain the exercise of market power, there must be a credible threat of re-regulation in the event of identified exercise of market power. In order for such a threat to be credible, there are four necessary conditions:

- the regulator must be able to assess when market power is being abused
- there must be a clear trigger for re-regulation when market power is being abused
- re-regulation must remove from the firm any excess returns earned in the period prior to re-regulation
- the threat must be a continuing one.

The current monitoring regime does not encompass any of these necessary conditions. Moreover, for the reasons discussed in section 4 of this submission, the ACCC does not consider that the design and implementation of any monitoring regime is capable of meeting these conditions.

In relation to the first condition, that of the regulator being able to assess when market power is being abused, the ACCC is not able to do this as a result of its monitoring role. This is explained in section 3 of this submission. The Tribunal in the Sydney airport case also heard evidence that Sydney airport faced uncertainty as to the level of charges which the Government and the ACCC would regard as appropriate.⁵⁴

Consistent with the limited ability of the price monitoring regime to demonstrate abuse of market power, there is no clear trigger for re-regulation in the current regime (the second condition above). The decision as to the appropriate future regulation will be made by the Government, after considering the recommendations of the PC resulting from the current inquiry. While the Government announced a set of review principles at the start of the price-monitoring period against which airport operators' conduct would be judged in this review, the PC's terms of reference also include a range of other considerations and there is certainly not a clear trigger for re-regulation in this process. Moreover, the PC's expanded terms of reference do not explicitly address the source of 'excess' returns and, in particular, separate out gains in earnings not from the exercise of monopoly power, but from gains in lower costs/technical efficiency.

⁵³ Virgin Blue Airlines Pty Ltd [2005] ACompT 5, para. 505-6.

⁵⁴ *ibid.*, para. 502.

As the Tribunal noted, there does not appear to be a mechanism to remove from the firm any excess returns, in the event that it is found that market power has been abused.

Finally, rather than the threat of re-regulation being a continuing one, the current arrangements were put in place for five years and the review is being conducted after only three years of data from the price monitoring period are available. The PC has been asked to recommend to the Government what the appropriate future regulatory arrangements should be, at least partly on the basis of the conduct of the firms over this short three-year period. In the ACCC's view, any results over such a limited period, or even a series of inevitably short periods, cannot be used to make a judgement about whether regulation is required. Rather, it is the structure of the market which should be examined to determine what the incentives on firms are and, therefore, what the appropriate regulatory arrangements are to constrain such market power.

2.1.4 The effects of the use of market power

The ability of the airports to use their high levels of market power is more likely than not to result in prices for aeronautical services above efficient levels (and possibly capacity and/or quality which are below optimum levels).

Of course, profit maximising pricing by an airport will always involve the airport raising the price of aeronautical services until demand is relatively responsive to that price level. As discussed above, demand for airport services in Australia is relatively unresponsive to price changes. This means that the profit-maximising monopoly distortion to price, relative to marginal cost, may be substantial and higher aeronautical charges are likely to have significant distributional consequences, as well as allocative efficiency consequences.⁵⁵

The distributional consequences of monopoly pricing are directly relevant to the inquiry, as the terms of reference require the PC to:

analyse ... the ...economic and distributional impacts of the current arrangements and ... alternatives

Accordingly, the fundamental economic characteristics and institutional circumstances of the price-monitored airports (especially natural monopoly and low price elasticity) can be expected to drive three key distributional outcomes.

First, the ability of the airport operators to price above efficient levels will be reflected in transfers from airport users, and especially airline passengers, to airport operators, and their shareholders.

Second, the market power of the airports would have been reflected as well in the prices paid for the airport leases, as these would have included to some degree a capitalisation of the bidders' expected ability to increase aeronautical charges and secure a stream of future profits. This represented an up-front lump sum transfer from

⁵⁵ The extent of allocative efficiency consequences or 'deadweight loss' caused by an increase in aeronautical prices will depend on the level of the starting price, relative to the monopoly level price.

each successful bidder to the Government treasury for deployment as public funds—to be recouped over time later by the airports from transfers from airport users/passengers. To the extent that this capitalisation was realised, the combination of the airports' privatisation (as concession leases) and the withdrawal of the formal regulation of their charges involved the 'capture' of some airport monopoly rents⁵⁶ by the Government in the form of an indirect tax on future airport users.⁵⁷

Third, the once-off addition to public funds from the airport lease sale becomes a marginal increase in public expenditure or government debt reduction. The distributional (and efficiency) impacts of this are likely to be wide-reaching and reflect general government expenditure policies.

2.1.5 Conclusions on market power

The ACCC considers that there have been no substantial changes to the market structures of the price-monitored airports since the last PC inquiry (2002). The significant barriers to entry associated with the natural monopoly characteristics of the major airports in Australia, combined with the level and inelasticity of demands and limited supply substitution possibilities continue to exist and can be expected to prevail for the foreseeable future.

The entry of Avalon airport in Melbourne, while providing an alternative for some air services and passengers, does not act to constrain the market power of Melbourne airport to any significant degree. The important network benefits that accrue to both airlines and their passengers from airlines concentrating their services at one location in each capital city limits the extent to which secondary airports can constrain the market power of the major capital city airports in Australia.

On the demand side, in terms of the main reason for travel to particular airports, data examined by the ACCC is broadly consistent with that used by the PC. One difference is that this data shows the main reason for domestic travel to Darwin airport is business/VFR, in common with the other price-monitored airports, whereas the PC considered that domestic travel to Darwin was predominantly for holiday/leisure. The data considered by the ACCC would suggest a greater degree of market power held by Darwin airport.

The ACCC also considers that there has been very limited change, if any, in the extent of airports' market power over particular services. There remains a bundle of services which airport users must use if they are to use the airport at all. This bundle includes landside passenger access and, to different degrees at different airports, aircraft refuelling services. While passengers may use different forms of transport to access the airport, airports generally have a monopoly over all of these forms of access—

⁵⁶ Strictly speaking, some of these capitalised rents may derive from expected cost efficiency gains as well. In the extreme case that strong competitive tendering for the leases resulted in all of the expected future monopoly rents as well as cost savings being factored into the successful bid for an airport, the airport operator would earn little or no 'excess returns', because the present value of future profits would have been transferred to the government.

⁵⁷ Of course, on efficiency grounds, it may well be, given the low price elasticity, that the marginal social cost of raising the additional public funds by this means is comparable to the marginal cost from other sources. At the same time, the distributional impact is a matter of government policy.

including on-airport car parking. Therefore, the ACCC considers that both landside passenger access and aircraft refuelling should be included in any future regulatory arrangements.

The ACCC considers that there are no effective constraints on the exercise of the moderate to high levels of market power held by the price-monitored airports. The ability of airports to derive non-aeronautical revenues does not operate as a significant constraint on aeronautical prices and may indeed result in an increase in aeronautical prices. The extent of airlines' countervailing power is also severely limited and depends on airlines having a viable alternative airport to use. Finally, the monitoring regime does not provide a significant constraint on aeronautical charges at the price-monitored airports due to the absence of a credible threat of re-regulation in the event of the exercise of market power and the intrinsic difficulty of identifying definitive evidence of such abuse over relatively short review periods.

The ability of the airports to use their high levels of market power is more likely than not to result in prices for aeronautical services above efficient levels (and possibly capacity and/or quality which are below optimum levels). Given the generally low elasticity of demand for airport services, this is likely to result in significant distributional effects, as well as allocative efficiency consequences.

In conclusion, the ACCC considers that the price-monitored airports possess moderate to high degrees of market power over the bundle of 'aeronautical' services which are required to be consumed by airport users if they are to use the airport at all. None of the factors of non-aeronautical revenues, airline countervailing power or the price-monitoring regime operate as an effective constraint on the exercise of airports' market power. The extent to which Part IIIA of the Trade Practices Act operates as a constraint is considered in section 4.3 of this submission.

The following section gives a brief overview of the economic regulatory arrangements that applied to airports in Australia prior to the current arrangements.

2.2 Previous arrangements for regulated airports

Government was initially involved in developing and operating airport infrastructure in Australia. In the mid-1980s, the Government decided to operate airports on a more commercial basis and it established the Federal Airports Corporation (FAC) to own and operate the airports. FAC charges were later subject to economic regulation in order to ensure that the FAC's market power in aeronautical services was not abused. Economic regulation also applied following the later privatisation of government / FAC airports.

2.2.1 Government ownership of airports

The early years of aviation in Australia were typified by heavy government involvement in developing, building, and operating airport infrastructure. The notion that the aviation industry itself should meet the cost of these facilities was slow to emerge. Indeed, prior to 1947, there was no systematic attempt to recover aviation

industry costs,⁵⁸ and it was not until 1961 that a policy of full cost recovery was adopted.

Recognising the problems with the existing cost-recovery arrangements (which throughout the 1960s and 1970s generally saw only 50 per cent of costs returned), the Government launched an independent inquiry (the Bosch inquiry) into aviation cost recovery in 1984. This inquiry was highly critical of the current approach and noted that the costs of providing and maintaining aviation infrastructure were not adequately accounted for, charges were not closely related to costs, and investment decisions were taken without regard to financial consequences.⁵⁹

As a result of the findings of the Bosch inquiry, the FAC was created, with the Government intending that the FAC manage and develop airports on a commercial basis, requiring that it achieve a reasonable rate of return on its assets and pay a reasonable dividend to the Government. Nevertheless, the FAC was still subject to a degree of government oversight. The economic rationale for maintaining government involvement was that any airport operator may possess significant market power and may use this power to restrict an airport's capacity, increase landing fees and earn monopoly profits.⁶⁰

One component of this oversight was the requirement that the FAC notify the minister prior to imposing or varying an aeronautical charge. The FAC was prohibited from charging for aeronautical services above reasonable costs.⁶¹

While the FAC progressively brought fees more closely into line with costs, charges for most services (including landing and parking of aircraft and transfer of passengers and cargo) were still imposed through a single landing charge.⁶² Further, as single uniform rates for aeronautical charges were adopted across all FAC airports, no allowance was made for the very real possibility that costs would vary between airports. Consequently, charges paid by regional operators, for example, bore little relationship to the costs of their use of airport facilities.⁶³

In 1991 the Government declared the FAC's aeronautical charges under s. 21 of the *Prices Surveillance Act 1983*. The declaration required the FAC to notify the Prices Surveillance Authority (PSA) prior to raising its aeronautical charges.

⁵⁸ Amendments to the *Air Navigation Act 1920* were intended to achieve recovery of 30 per cent of the operating costs of government-provided aviation facilities and services.

⁵⁹ Independent Inquiry into Aviation Cost Recovery, *Aviation Cost Recovery Report of the Independent Inquiry*, AGPS, Canberra, 1984, p. 14.

⁶⁰ Industry Commission, *Intrastate Aviation Report 25*, AGPS, Canberra, 1992, p. 91.

⁶¹ Sub-section 56(10) of the *Federal Airports Corporation Act 1986*.

⁶² Prices Surveillance Authority, *Inquiry into the Aeronautical and Non-aeronautical charges of the Federal Airports Corporation*, AGPS, Canberra, 1993, p. 71.

⁶³ Industry Commission, *Intrastate Aviation Report 25*, AGPS, Canberra, 1992, p. 5.

In November 1992, following recommendations from the Industry Commission's inquiry into intrastate aviation and PSA concerns arising from the second FAC price notification, the PSA was directed to hold an inquiry in relation to the pricing of aeronautical and non-aeronautical activities by the FAC.

The findings were released in 1993. Of particular concern to the PSA was the definition of aeronautical services. The PSA argued that the distinction between aeronautical and non-aeronautical services was in certain respects arbitrary and that this rendered the interpretation of airport performance, including aeronautical cost recovery, difficult. Moreover, it allowed the FAC to shift functionally aeronautical services into the non-aeronautical area. Consequently, the PSA submitted that aeronautical activities should be defined by reference to the FAC's core functions including:

- all aircraft movement related services, including refuelling, airfield security, the provision of hangars or hangar sites and some maintenance facilities
- certain terminal facilities including check-in and some office space necessary to accommodate staff managing the airport activities
- other airside related activities such as baggage handling and freight facilities.⁶⁴

2.2.2 Privatisation

In 1995 the Government decided to shift ownership of all 22 FAC airports to the private sector. 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.⁶⁵ The sale was completed in two phases; the first in 1997 and the second in 1998. 'Phase One' airports included Melbourne, Brisbane and Perth airports, while 'Phase Two' included Adelaide, Darwin, Canberra and Hobart airports. The shift in ownership was based upon long-term concession leases for each airport with the successful buyer determined by competitive tendering.

The move to privatisation was designed partly to promote efficiency and it was accompanied by transitional price regulation measures in order to constrain abuse of the market power held by the newly privatised airports. In announcing the temporary arrangements, the Government also stated that it would determine the subsequent regulatory framework after a detailed review.

Price regulation

Aeronautical services

The transitional price regulation measures, applied to 11 of the largest privatised airports,⁶⁶ capped aeronautical prices at the former FAC levels, with an efficiency

⁶⁴ Prices Surveillance Authority, ch. 4.

⁶⁵ Department of the Parliamentary Library, Australia, *Turbulent Times: Australian Airline Issues, Research Paper No. 10*, May 2003.

⁶⁶ The eleven airports were: Melbourne, Brisbane, Perth, Adelaide, Alice Springs, Canberra, Coolangatta, Darwin, Hobart, Launceston and Townsville. These, along with Sydney airport,

factor, in the form of CPI (consumer price index)-X price caps. The 'X' values were set by the Government, based on recommendations made by the ACCC. The ACCC's advice was based on its analysis of projected demand, costs and productivity improvements.⁶⁷ New investment was facilitated through specific provisions.

Certain 'aeronautical-related' services were subject to price monitoring arrangements, under which airports were not required to notify the ACCC prior to increasing charges. The ACCC's role was limited to reporting on the prices and costs associated with the provision of these services.

Sydney airport, which remained under government ownership, was subject to prices notification requirements for aeronautical services, while its aeronautical-related services were subject to price monitoring.⁶⁸

On 5 October 2001, in response to the financial pressures faced by airports as a result of the suspension of Ansett's operations and the September 11 terrorist attacks in the United States, the Minister for Financial Services and Regulation announced changes to the regulatory arrangements. The ACCC was directed to allow price increases of up to 6.2 per cent for Melbourne, 6.7 per cent for Brisbane and 7.2 per cent for Perth; and price caps for Adelaide, Canberra and Darwin airports were removed and replaced with price monitoring.⁶⁹

'Aeronautical services', over which airports were considered to have market power, were defined as:

- aircraft movement facilities and activities, comprising:
 - airside grounds, runways, taxiways and aprons
 - airfield lighting, airside roads and airside lighting
 - airside safety
 - nose-in guidance
 - aircraft parking
 - visual navigation aids.
- passenger processing areas, comprising:
 - forward airline support area services

constituted the 12 core-regulated airports. (Cairns airport was operated by a local government authority.)

⁶⁷ Direction no. 13 set out the X values; they were Adelaide 4, Alice Springs 3, Brisbane 4.5, Canberra 1, Coolangatta 4.5, Darwin 3, Hobart 3, Launceston 2.5, Melbourne 4, Perth 5.5 and Townsville 1.

⁶⁸ Sydney airport was privatised in June 2002, when all the shares in the government-owned Sydney Airports Corporation Limited were sold to the Macquarie Bank-led Southern Cross consortium.

⁶⁹ Hockey, J. (Minister for Financial Services and Regulation), *Prices oversight arrangements at airports*, Media Release no. FSR/081, 5 October 2001.

- aerobridges and airside buses
- departure lounges and holding lounges (excluding commercially-important-persons lounges)
- immigration and custom service areas
- public address systems, closed circuit surveillance systems, security systems
- baggage make-up, handling and reclaim
- public areas in terminals, public amenities, public lifts, escalators and moving walkways
- flight information display systems
- landside roads, landside lighting, and covered walkways.⁷⁰

However, services in the above list that were subject to a contract, lease, licence or authority given under the common seal of the FAC were excluded.

In determining an airport's compliance with the price cap, the price cap formula required the ACCC to derive the average movement in prices. Compliance occurred when the weighted average price change equalled CPI-X, with any over- or under-recoveries carried over between years.

The price cap arrangements also included a necessary new investment (NNI) pass-through provision, designed to provide incentives for airport operators to carry out new investment. As stated in the (then) Department of Transport and Regional Development's Pricing Policy Paper, the intention of the provision was to encourage commercially driven outcomes.⁷¹ The NNI provisions allowed airports to increase charges to fund new investment, provided the investments met certain criteria. Amongst other things, the criteria focussed on user support and the relationship between the cost of the project and the proposed charges.⁷²

In response to uncertainty over what constituted 'new investment', the ACCC developed a position paper in April 2000. Subsequently, airport operators and users were able to reach agreement on a range of projects at most privatised airports. Between 1998 and 2002, the ACCC approved over \$200 million in new investments under these provisions.

Aeronautical-related services

As mentioned above, certain 'aeronautical-related' services were subject to price monitoring arrangements, under which airports were not required to notify the ACCC prior to increasing charges. The ACCC's role was limited to reporting on the prices and costs associated with the provision of these services. 'Aeronautical-related services' was defined to include:

⁷⁰ Declarations no. 87 and 88.

⁷¹ Department of Transport and Regional Development, *Pricing Policy Paper*, November 1996, p. 1.

⁷² Direction no. 13, 22 May 1998.

- 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
- car parks (including public and staff parking but not valet parking).⁷³

Quality of service monitoring

Part 8 of the *Airports Act 1996* required the ACCC to monitor the quality of certain airport services and facilities. Since price, profit incentives, and quality of service may be inter-dependent, quality of service monitoring complemented the prices oversight arrangements.

Quality was measured against performance indicators jointly developed by the ACCC and the Department of Transport and Regional Development. Key indicators included efficiency in aircraft movement areas, terminal crowding and waiting times in passenger processing and baggage handling areas.

Information was gathered from a variety of sources, including airline and passenger surveys. Airservices Australia, a statutory corporation responsible for air traffic control and emergency services, also provided annual data on aircraft delays and other aspects of airport performance.

The following section gives a brief overview of the findings and recommendations of the last PC inquiry, and the Government response, which established the current regulatory arrangements.

2.3 PC findings and Government response

On 21 December 2000, the Assistant Treasurer referred the review of airports regulatory arrangements to the PC.⁷⁴ On 13 May 2002, the PC's final report on *Price Regulation of Airport Services* and the Government's response to the report were released.⁷⁵ The Government accepted the PC's recommendations that Sydney, Melbourne, Brisbane, Perth, Adelaide, Canberra and Darwin airports be subject to price monitoring for five years, effective 1 July 2002. Price monitoring at Adelaide,

⁷³ Direction no. 14, 22 May 1998.

⁷⁴ Kemp, R. (Assistant Treasurer), *Productivity Commission Inquiry Into Prices Oversight Arrangements at Airports*, Media Release no. 056, 21 December 2000.

⁷⁵ Costello and Anderson (Treasurer and Minister for Transport & Regional Services, respectively), *Productivity Commission Report on Airport Price Regulation*, Media Release no. 024, 13 May 2002.

Canberra and Darwin airports, which had been in place since October 2001, was also to continue, albeit with some minor modifications.

Following another of the PC's recommendations, on 1 March 2004, the Government repealed the Prices Surveillance Act and replaced it with Part VIIA of the Trade Practices Act. This was not designed to have a substantive impact on the ACCC's ability to respond to pricing concerns. Rather, it signified the changing role of prices surveillance in the economy, as part of competition policy, rather than as a tool to reduce general price inflation.⁷⁶ Existing directions or declarations made under the Prices Surveillance Act now have effect under the relevant provisions of Part VIIA of the Trade Practices Act.

The findings, recommendations, and the Government's responses relevant to the current inquiry, are summarised below.

2.3.1 Key findings of the PC (2002)

Market power of airports

- Sydney, Melbourne, Brisbane and Perth have high market power; Adelaide, Canberra and Darwin have moderate market power. This arises from significant barriers to entry, including natural monopoly features as well as regulatory constraints. (findings 5.1, 5.2, 5.3)
- High market power was found to exist for aircraft movement facilities, vehicle access, passenger processing and aircraft refuelling services. (finding 6.1)
- Price discrimination and the constraining effect on aeronautical prices of non-aeronautical activities limit the efficiency loss of market power. (findings 7.1, 7.4, 7.6, 7.8)
- The countervailing power of airlines in their dealings with major capital city airports appears limited. This is primarily due to the lack of credible alternatives available to airlines. (finding 7.2)
- The existence of benchmarking (against other airports' costs and performance) and competition in the market for the supply of airport management services means that managers of privatised airports with market power are unlikely to have much scope to allow inefficiencies in production. (finding 7.7)
- An airport with market power has little incentive to deny or frustrate access to airlines. However, it may have an incentive to restrict 'front-door' access to off-airport providers of competing services. (finding 7.9)

Review of airport regulation

- Regulated prices may have been too low; the NNI provisions were ineffective; regulated prices on a production cost or rate of return basis at a constrained Sydney airport would not be appropriate. (findings 8.1, 8.2, 8.4)

⁷⁶ Explanatory memorandum to the *Trade Practices Legislation Amendment Bill 2003*.

- In order to maximise efficiency, Sydney airport’s aeronautical land should be valued at its opportunity cost (as opposed to an indexed historical cost) if prices are set by the regulator on a production-cost basis. (finding 8.3)
- It does not appear that the overall quality of services at monitored airports has decreased since monitoring began. While there have been some problems with the process of quality of service monitoring, it has nevertheless allowed for some useful inter-airport comparisons. Compliance costs with this monitoring have also been kept to a minimum. (finding 9.1)

Regulatory options

- Price caps should only be used when there is clear evidence that without them, economic efficiency would be seriously impaired; if they are used, a dual-till should be applied and treatment of investment clearly spelled out. (finding 10.1)
- Price monitoring can increase efficiency where there is no substantial market power or where the power is constrained. Price monitoring can reduce compliance costs, promote commercial negotiations and ultimately increase efficiency. (finding 11.1)
- There is no need for an airports-specific access regime. (findings 11.2, 11.3)

2.3.2 PC recommendations and Government responses

The Government accepted the PC’s recommendations that Sydney, Melbourne, Brisbane, Perth, Adelaide, Canberra and Darwin airports be subject to price-monitoring arrangements for a period of five years, with a review of the arrangements to be completed towards the end of the five-year period. As a safeguard against the abuse of market power, there was a threat of re-introduction of price regulation in the event of identified abuse of market power.

The Government supported the introduction of price monitoring as a way of providing a greater scope for the airports to price, invest and operate efficiently, while enhancing market transparency and assisting the competitive process. (recommendations 1, 2)

Quality monitoring of regulated services was to continue at all airports subject to price monitoring. (recommendation 3)

While the Government supported in principle the PC’s recommendation 5 that commercial agreements should be encouraged and assisted (for example, by providing guidelines regarding coverage) under price-monitoring arrangements, it considered that this would result in a costly process. Nevertheless, the Government stated that it was prepared to assist airports and airport users develop industry guidelines for commercial agreements should that be requested. It also noted that, where commercial agreements could not be concluded, the access provisions in Part IIIA of the Trade Practices Act provided recourse to arbitration for determining access conditions for ‘declared’ services.

The Government accepted that the new regime should be independently and publicly reviewed towards the end of five years, with the objective of ascertaining the need for any future price regulation of airports. However, the Government reserved its right to bring forward a review, or conduct a separate review, if there was a strong indication that an airport had unjustifiably increased its prices. The Government stated that it would only consider re-introducing price controls if it formed the view that an airport had operated in a manner inconsistent with the following principles.

Review principles

- a. At airports without significant capacity constraints, efficient prices broadly should generate expected revenue that is not significantly above the long-run costs of efficiently providing aeronautical services (on a 'dual-till' basis). Prices should allow a return on (appropriately defined and valued) assets (including land) commensurate with the regulatory and commercial risks involved.
- b. Price discrimination and multi-part pricing that promotes efficient use of the airport is permitted. This may mean that some users pay a price above the long-run average costs of providing aeronautical services, whereas more price-sensitive users pay a price closer to marginal cost.
- c. At airports with significant capacity constraints, efficient peak/off-peak prices may generate revenues that exceed the production costs incurred by the airport. Such demand management pricing practices should be directed toward efficient use of airport infrastructure and, when not broadly revenue neutral, any additional funding that is generated should be applied to the creation of additional capacity or undertaking necessary infrastructure improvements.
- d. Quality of service outcomes should be consistent with users' reasonable expectations, and consultation mechanisms should be established with stakeholders to facilitate the two way provision of information on airport operations and requirements.
- e. It is expected that airlines and airports will primarily operate under commercial agreements and in a commercial manner, and that airport operators and users will negotiate arrangements for access to airport services.

The Government supported the application of the generic provisions of Part IIIA to airports, acknowledging that the then existing airport-specific access regime, as set out in s. 192 of the Airports Act, was introduced as a transitional measure.

The Government supported the intention of the PC's recommendation to make clear the new arrangements prior to the sale of Sydney airport, so that bidders for that airport could factor into the sale price expected future airport charges.

The next section of this submission contains a discussion of 'light-handed' regulation, which was introduced following the PC's recommendations, including the rationales for the move away from more traditional, direct forms of price regulation.

2.4 The introduction of 'light-handed' regulation

The current monitoring arrangements have been described as being an example of 'light-handed' regulation, as compared with traditional 'heavy-handed' regulation, such as price or revenue caps, or rate of return regulation. This is reflected in the terms of reference for the current PC inquiry, in which the Government refers to its

objectives in privatising the airports and ‘moving to a light-handed pricing regulatory regime’.⁷⁷

However, there has not been much public discussion or debate about what is meant by the term ‘light-handed’, how it operates in practice, and what it is capable of delivering, particularly in the context of monopoly infrastructure.

2.4.1 Meaning of ‘light-handed’ regulation

Light-handed regulation is not defined by any single specific regulatory regime or arrangement. Rather, it has come to be broadly accepted to refer to circumstances where there is an absence of any direct regulatory control over a firm’s core pricing, output, and investment decisions, but typically some form of ‘oversight’, possibly with ‘follow up’. As a result, from the point of view of a firm (that might otherwise be subject to some ‘direct control’), there is little ‘intrusion’ and its costs of compliance are low. National Economic Research Associates (NERA) define light-handed regulation as a form of regulation that falls short of the regulator defining maximum tariffs for every service, particularly where these tariffs are set through a regular, formal cost-based review.⁷⁸ Essentially, light-handed regulation provides the freedom for firms to make price, quality and investment decisions without consultation with a regulatory authority or the government.

Regulation involves a trade-off between bringing prices in line with efficient costs and minimising the cost of the regulatory process. Light-handed regulation places less emphasis on reducing efficiency loss from prices being above costs for the potential benefit of reducing administrative or other forms of efficiency loss or distortions arising through the implementation of regulation.

Given the difficulty in defining a relative concept such as ‘light-handed’, regulatory options cannot be precisely allocated into such a category. As such, it is more appropriate to consider where regulatory options fall along a continuum, determined by the extent to which they exhibit characteristics which are generally considered to be either light or heavy-handed.

The PC indicated the following factors as important to determining the extent to which a regulatory regime is light-handed:

- substantiveness of the variables the regulator attempts to control
- extent to which the regulator attempts to control the relevant variables
- compliance costs imposed on businesses.⁷⁹

⁷⁷ Peter Costello, Terms of Reference Review of Price Regulation of Airport Services, 6 April 2006, 4c.

⁷⁸ NERA, *Alternative Approaches to ‘Light-Handed’ Regulation – A Report for the Essential Services Commission Victoria*, Sydney, 5 March 2004.

⁷⁹ Productivity Commission, *Review of the Gas Access Regime, Draft report*, Canberra, 2003, p. 258.

In addition, NERA⁸⁰ indicates that the heavy-handedness of a regime can be assessed by the extent to which it is intrusive, prescriptive, and costly to administer or comply with.

Any analysis of regulatory alternatives must also distinguish between the regulatory principles and the administrative processes which give effect to those principles. The manner in which a principle is implemented can be a significant determinant of how light-handed the regime is in practice.

2.4.2 Rationales for move to ‘light-handed’ regulation

The following section explores the rationales used for moves to light-handed regulation and then discusses the economic theory which might underlie an application of light-handed regulation.

The practice

Moves to apply light-handed regulation seem to have arisen from a concern that traditional forms of regulation involve high (efficiency) costs associated with regulatory error, as well as high costs of compliance and administration. On the other hand, it appears to have been assumed that light-handed regulation will encourage commercially-negotiated outcomes, while being effective in restraining monopoly behaviour.

The effect of regulation on investment

The perception that direct regulation has negative effects for investment (and commercial negotiation) is reflected in the PC’s issues paper (p. 22), which asks

Even if there is some evidence of misuse of market power by the price monitored (or other) airports, do concerns about the potentially adverse effects on investment militate against the reintroduction of more heavy handed price regulation? To what extent has the current light-handed approach addressed the concerns about investment inhibition (and other problems such as an unwillingness to negotiate genuinely) that arose under the previous regulatory regime?

In its submission to the PC’s inquiry into the gas access regime, the ACCC addressed the perceptions underlying the recommendations in the draft report that the gas access arrangements may distort investment decisions and thereby reduce efficiency in the long term. A summary of current evidence on investment outcomes was provided, which demonstrated that the introduction of independent and transparent regulation had coincided with a dramatic growth of the gas transmission pipeline network. Similarly, substantial investment has taken place in the electricity transmission sector, which is also subject to revenue controls administered by the ACCC. The ACCC noted that the level of investment accommodated in its decisions exceeded the levels that were undertaken prior to the introduction of the regulatory regime.⁸¹

⁸⁰ NERA 2004, op. cit., p. 8.

⁸¹ Australian Competition and Consumer Commission, *Submission to the Productivity Commission Draft Report: Review of the Gas Access Regime*, 17 March 2004, pp. 6-7.

In addition, by constraining the exercise of market power in the transmission and distribution segments of the gas market, the gas access regime provided an environment for investment in upstream and downstream markets which would not otherwise have been viable. In the absence of price regulation, it is likely that monopoly transmission prices would have distorted downwards investment in related industries.⁸²

In its submission to the last PC airports inquiry, the ACCC recognised that price caps may not provide airport operators with sufficient incentives to invest, unless there are additional provisions to compensate them for the costs incurred. The ACCC considered that investment provisions should be included as part of any price cap arrangements to apply to airports. It considered that changes should be made to the previous arrangements in order to address the lack of clarity and high administrative costs that had been associated with the previous NNI provisions. In particular, the ACCC considered that a clear and workable cut-off between what can and cannot be passed through should be established and that the investment projects and dollar amounts factored into price cap parameters should be transparent.⁸³

The ACCC reviewed the economic literature on the subject of regulation and investment as part of its submission to the inquiry into the gas access regime and considered that the following conclusions could be drawn from it:

- there are efficiency benefits from constraining monopoly pricing through regulation, particularly in related markets
- these benefits must be weighed against any restraining distortions to investment that limiting monopoly prices might encourage
- whether regulation will discourage investment will depend on the regulatory arrangements in question, and especially whether they provide sufficient returns and whether there is sufficient certainty about the future actions of regulators.⁸⁴

In its submission, the ACCC assessed the view that regulation deterred and distorted investment. As noted in the submission, regulatory risk will arise if the firm perceives a risk that the regulator will deny it the opportunity to earn appropriate returns commensurate with its perceived risk. This might arise through regulatory error or through ex post adjustment of actual returns.⁸⁵

A particular area where regulatory error may occur is the project's cost of capital and its incorrect underestimation by the regulator. The Allen Consulting Group (ACG) considered that rates of return approved by Australian regulators are skewed in favour

⁸² Australian Competition and Consumer Commission, 2004, p. 8.

⁸³ Australian Competition and Consumer Commission, 2001, pp. 99-109.

⁸⁴ Australian Competition and Consumer Commission, 2004, Appendix C.

⁸⁵ *ibid.*, pp. 10-13.

of gas pipeline owners.⁸⁶ The ACCC noted that the scope for regulatory error is reduced by provision for judicial and merits review of regulatory decisions. These provide an avenue to reconsider regulatory decisions and if justified correct any regulatory error, as well as providing clarification of the intent and meaning of the regulatory framework. The scope for regulatory error falls primarily on the return on equity component of the allowed rate of return; Australian regulators are typically conscious of this and tend to be conservative in their selection of values.

Ex post adjustment of actual returns does not generally occur in practice in Australia, because regulatory practice has been to apply an incentive based framework in which the time path of regulatory revenues are set in advance, so that the regulated firm has the ex ante expectation of achieving the allowed rate of return. For greenfields investment, regulated firms can also achieve a significant level of regulatory certainty by entering into an upfront regulatory agreement with the regulator.

In conclusion, the economic literature indicates that whether regulation will discourage investment will depend on the regulatory arrangements in question, and especially whether they provide sufficient returns and whether there is sufficient certainty about the future actions of regulators. In practice, evidence on regulatory regimes which the ACCC administers, such as the gas access regime, is that the design and ex ante application of regulation substantially mitigates the theoretical concerns regarding investment incentives.

A major part of the rationale for moving to light-handed regulation is that it will avoid the risk of regulatory error involved in regulators providing insufficient returns. By allowing firms to price without prior regulatory approval or limits on revenues, it is argued that such risk is avoided. However, standard economic theory suggests that a profit-maximising monopolist will restrict output and investment in capacity/quality in order to increase prices, which results in an allocative efficiency loss, because some consumers will not be served even though their willingness to pay exceeds the marginal cost of serving them. This is not a significant issue in relation to airports because of the restrictions on vertical integration which mean that access per se is not usually an issue. However, in general, light-handed regimes may result in levels of investment below levels that would be achieved under heavier-handed regimes, particularly where such 'heavier-handed' regimes include quality of service requirements. For example, service standards are included in the regulatory regime applied to electricity transmission operators and administered by the Australian Energy Regulator (AER). Under these arrangements, the transmission companies are given incentives to improve service quality.⁸⁷

In addition, light-handed frameworks by construction may be highly uncertain, and add a layer of risk that may well inhibit investment. As pointed out by Haucap,

⁸⁶ Allen Consulting Group, *Review of studies comparing international regulatory determinations*, 2004, p. 113.

⁸⁷ For further details, see ACCC, *Statement of principles for the regulation of transmission revenues, Service standard guidelines*, 12 November 2003.

Heimeshoff and Uhde,⁸⁸ the more important specific investments are in an industry (and therefore typically the higher the sunk costs), the more important (for the firm's investment decisions) it is that the regulatory framework remain stable and predictable. As discussed further in section 4 of this submission, attempts to make light-handed regimes 'more effective', by strengthening the threat of re-regulation, necessarily introduce uncertainty into the arrangements governing the firm.

As discussed in section 2.1.3 of this submission, there is uncertainty in the current arrangements for airports in respect of what level of charges the Government would regard as excessive and therefore justify re-regulation and indeed whether the criteria for an 'excessive level' (such as excess returns) can be unambiguously and empirically determined. The outcome of the current inquiry may therefore be regarded as highly uncertain and may run the risk of inhibiting investment, because the airport operators face uncertainty over how future charges might be limited.

The environment for commercial negotiation

The PC's terms of reference list as one of the three objectives of the regulatory regime that it should 'facilitate commercially negotiated outcomes in airport operations'. The PC has asked for comment on the extent to which the current light-handed approach has addressed the problem of 'an unwillingness to negotiate genuinely ... that arose under the previous regulatory regime'.

The ACCC considers that, while the particular regulatory arrangements applied to an industry may affect whether there is scope for commercially negotiated outcomes, the primary determinant is the respective degrees of bargaining power of the parties. As discussed in section 2.1.3 of this submission, it is only where airlines have a viable alternative to using a particular airport that they will have countervailing power relative to airport operators. In general, airlines will have little countervailing power over airport operators.

Therefore, it is not at all clear that a move to light-handed regulation will necessarily foster and facilitate commercially-negotiated outcomes.

Administration and compliance costs

The PC's terms of reference also list as one of the three objectives of the regulatory regime that it should 'minimise compliance costs on airport operators and the Government'. As discussed above, low compliance costs are a defining feature of 'light-handed' regulation.

The ACCC considers that monitoring regimes do not necessarily involve lower compliance costs than alternative direct forms of regulation, such as price or revenue caps. As discussed in section 4 of this submission, the compliance costs of a particular regulatory regime will depend to a large extent on the specification of the regime. The ACCC's experience is that undertaking annual monitoring is a relatively resource intensive exercise when compared with administering price caps. Moreover, experience from other jurisdictions also suggests that attempts to 'improve'

⁸⁸ J Haucap, U Heimeshoff and A Uhde, *Credible Threats as an Instrument of Regulation for Network Industries*, August 2005, forthcoming in P Welfens (ed.), *Regulatory Changes, Innovations and Investment Dynamics in the Digital World Economy*, Springer: Berlin 2006.

monitoring arrangements is likely to result in regimes which expand the scope of data collected and are high in compliance costs.

Constraint on monopoly pricing

The aim that light-handed regulatory regimes will also constrain monopoly pricing is often not matched by the design of the regulatory arrangements. As discussed in section 2.1.3 of this submission, the current airports monitoring regime does not provide a significant constraint on aeronautical charges at the price-monitored airports due to the absence of a credible threat of re-regulation in the event of the exercise of market power.

Haucap et al⁸⁹ highlight a number of problems associated with ‘threat-based regulatory systems’ which have been demonstrated from experience in Germany and New Zealand. The authors explain that the idea behind threat-based regulation is similar in principle to the contestable market model and that *actual* regulation may not be necessary as long as the threat of regulation is credible. If the regulatory threat is not credible, such regimes amount to no regulation. This has led to refinements of threat-based regimes, such as the ‘quasi-automatic threshold system’ originally designed for New Zealand’s electricity distribution networks, which is discussed further in section 4 of this submission.

Haucap et al explain that in both Germany and New Zealand, light-handed regulatory regimes have now been abandoned in their pure form and there has been a shift towards more traditional, heavy-handed approaches to regulation.⁹⁰ There was widespread agreement among economists, legal scholars, and policy makers that the light-handed approach to regulation had failed in the German electricity industry. Two important reasons cited for this failure were that the regulator faced severe informational disadvantages and lacked the necessary instruments to sanction behaviour.⁹¹

Haucap et al highlight the difficulty of designing a light-handed regulatory framework which contains a credible threat of regulation, but at the same time does not inevitably lead to a shift towards heavy-handed regulation.⁹²

The theory

NERA⁹³ presents a theoretical framework for assessing when a light-handed form of regulation is appropriate. Elements considered within this framework include the prevailing market circumstances, the institutional context, dynamic considerations and procedural considerations. A summary of NERA’s framework is presented below.

⁸⁹ *ibid.*

⁹⁰ *ibid.*, p. 2.

⁹¹ *ibid.*, pp. 12-13. The authors explain that the German Cartel Office had to try to obtain information through legal processes and in a number of cases was not able to obtain necessary cost data. In addition, the Cartel Office did not have the power to set prices or to prescribe detailed pricing rules.

⁹² *ibid.*, 2005, p. 13.

⁹³ NERA 2004, p. 16.

Market circumstances

Substantial market power distorts market outcomes and can lead to inefficient production, reduced supply, excessive prices and allocative and dynamic inefficiency in related markets. The extent of market power will depend upon the level of actual or potential competition in the market and any countervailing power of buyers. Where these factors combine to constrain the actions of the monopoly service provider, light-handed regulation may be more appropriate.

Other market factors which influence the type of regulation are:

- the size or importance of the market or regulated entity; the cost of regulating small or unimportant entities potentially can outweigh the associated benefits
- whether vertical integration exists
- the potential for, and desirability of, price discrimination.

Institutional context

Light-handed regulation will be more effective where there are clear regulatory pricing principles which are implemented in an open, transparent and consistent manner. The regulatory threat (the threat of a more comprehensive regulatory regime in the event that entities do not meet the established regulatory 'outcome' conditions) must also be clearly defined and perceived as credible. The level of information asymmetry and the regulatory history of the industry are also important factors in determining this credibility.

Dynamic considerations

Information asymmetry prevents regulation from being able to produce closely a corresponding competitive market outcome. Accordingly, the potential for regulation to have a negative impact on market outcomes must be considered.

In a developing market, changing market conditions are likely to result in unwarranted efficiency losses when regulations are not flexible enough to allow firms to adapt appropriately. Additionally, in circumstances where an important regulatory outcome is to facilitate efficient investment, it is often considered that lighter-handed regulation is more likely to achieve the desired result. However, as long as the regulatory principles are clearly enunciated and consistently applied and information asymmetry regarding investment is low, investment should be reasonably efficient under a range of regulatory regimes.

Procedural considerations

The extent to which the details of a regulatory regime are made explicit at the outset must be determined and identified. This will depend largely on the pre-existing knowledge base of the industry, based on prior regulation and consultation in setting the new regime.

Administrative costs associated with up-front information provision can be substantial. Such information may however improve compliance with the guidelines

and efficiency in resolving disputes, which may reduce the ongoing costs of the regime.

2.4.3 Summary of introduction of ‘light-handed’ regulation

‘Light-handed’ regulation has no precise meaning; it is not an absolute concept and it does not refer to any single set of regulatory arrangements. It is normally understood to refer to any regime in which the regulator does not directly control substantive variables of a firm’s pricing and output and which imposes through oversight minimal compliance costs on business.

The stated rationales for the introduction of light-handed regulatory regimes appear to the ACCC to be questionable. Whereas there is a perception that light-handed regimes will be more conducive to investment, the ACCC considers that, while regulation can deter investment if it provides insufficient returns and/or is uncertain in its application, the evidence under so called ‘heavy handed’ regulatory regimes administered by the ACCC does not suggest that investment has been constrained. The more important consideration for investment outcomes is the certainty and stability of the regime and, in this respect, some ‘light-handed’ regimes risk being highly uncertain with under-recognised costs.

Light-handed regimes are also believed to encourage ‘improved’ commercial agreements and to be low in compliance costs. However, the evidence for this is not clear. Whether commercial agreements will be entered into will be largely determined by the strength of bargaining power of the respective parties. Their intrinsic nature may be unaffected by the regulatory arrangements. Indeed, in practice, some ‘light-handed’ regimes may turn out to be quite onerous and costly for both the regulated firms and the regulator.

Light-handed regimes may constrain monopoly pricing, but the experience suggests that this hinges on incorporating a credible regulatory threat which is difficult in practice. As a result, the outcome may well be closer to monopoly pricing.

On the other hand, light-handed regimes may be appropriate where the firm’s behaviour is constrained through market circumstances such as actual or potential competition, countervailing power of buyers, or evolving contestability through technological change and dynamic efficiency.

2.5 Description of the formulation and execution of the ACCC monitoring regime

In this section, the circumstances behind the formulation of the current monitoring regime administered by the ACCC are set out, together with a discussion of how the ACCC has carried out its roles.

2.5.1 Formulation of the current monitoring regime

Formulation of the price-monitoring regime

In its 2002 report, the PC outlined the features of a potential price monitoring regime for airports. Apart from requiring reporting of the weighted average cost of capital for the larger airports, the PC considered that the information requirements would be

consistent with existing disclosure and reporting requirements. Such information would continue to be formally audited. An annual report presenting monitored information would be published, 'with commentary (but not a pre-emptive assessment of the monitoring regime) by the ACCC (and auditors) where considered warranted'.⁹⁴

Consistent with these recommendations, the price-monitored airports continued to be subject to the financial accounts reporting provisions of Part 7 of the Airports Act, under which these airports are required to provide the ACCC with audited annual financial accounts.

The airports are required to provide the ACCC with annual financial accounts within 90 days of the end of a prescribed accounting period. The accounts include a profit and loss statement, balance sheet and statement of cash flows. In addition, other supporting information, such as statements on accounting policies and cost disaggregations between aeronautical and non-aeronautical costs are required.⁹⁵

Regulations made under subs. 141(2) of the Airports Act state that the airport-lessee company for a core-regulated airport must prepare and provide, for each relevant period:

- consolidated accounts and financial statements, in accordance with Australian Accounting Standards Board Standard No. 24 (Consolidation of Accounts) as in force for the period for itself and all airport-management companies for the airport, as if those airport-management companies were subsidiaries of the airport-lessee company
- consolidated financial statements for the operations, in relation to the airport, of itself and all airport-management companies at the airport, showing financial details in relation to the provision of aeronautical services and non-aeronautical services separately.

Direction No. 27, originally issued pursuant to s. 27A of the Prices Surveillance Act, requires the ACCC to undertake formal monitoring on an annual basis of the prices, costs and profits related to the supply of aeronautical services and aeronautical-related services by the price-monitored airports.

'Aeronautical services' and 'aeronautical-related services' are defined in the direction.

However, there are discrepancies between the information required under the Airports Act and that required under Direction 27. Direction 27 contains definitions of 'aeronautical services' and 'aeronautical-related services', whereas the Airports Act contains 'aeronautical services' and 'non-aeronautical services'. The definition of 'aeronautical services' in the Airports Act does not align either with the definition of

⁹⁴ Productivity Commission, 2002, pp. 350-54.

⁹⁵ In March 2004, the ACCC issued a revised *Airports Reporting Guideline Information Requirements under Part 7 of the Airports Act 1996 and Section 95ZF of the Trade Practices Act 1974* (the guidelines), which set out further details on reporting requirements, as well as principles which airports must follow in the preparation of regulatory statements.

‘aeronautical services’ in direction 27 nor with the expanded definition of ‘aeronautical’ and ‘aeronautical-related’.

Some items are included in regulation 7.03 but not in direction 27; in particular:

- maintenance and repair services in relation to runways, taxiways, and parking aprons
- environmental-hazard-control services
- services and facilities to ensure compliance with environmental laws
- facilities to enable the operation of quarantine services.

On the other hand, some items are included in direction 27 but are not clearly included in regulation 7.03; in particular:

- aircraft refuelling services (aeronautical)
- forward airline support area services (aeronautical)
- public and staff car parking (aeronautical-related)
- taxi holding and feeder rank services on airport (aeronautical-related)
- aircraft light and emergence maintenance sites and buildings (aeronautical-related).

Services in a number of other areas are defined with different wording between the two sets of requirements, but appear to be basically the same, for example:

Regulation 7.03	Direction 27
Rescue, fire-fighting and safety services	Airside safety
Baggage handling services	Baggage make-up, handling and reclaim
Toilets, seating, thoroughfares, transfer systems and aerobridges	Public areas in terminals, public amenities, public lifts, escalators and moving walkways; and aerobridges and airside buses

The services contained in regulation 7.03 which appear to be covered within the ‘aeronautical-related’ category under direction 27 are:

Regulation 7.03	Direction 27
Landside terminal access roads	Landside vehicle access to terminals
Passenger check-in facilities	Check-in counters and related facilities

Clause 3) of direction 27 excludes from the definition of ‘aeronautical services’ ‘the provision of a service, which, on the date the airport lease was granted, was the subject of a contract, lease, licence, or authority given under the common seal of the Federal Airports Corporation’, which extends to ‘a contract, lease, licence, or

authority exercised under an option in a contract, lease, licence, or authority given under the common seal of the Federal Airports Corporation’.

Importantly, there was no explicit and comprehensive linking of the data to be provided under the monitoring regime with the purposes to which it was to be put; that is, to determine whether airports were abusing their monopoly power through excess returns ((average) revenues in excess of long-run (average) costs) or to determine whether airports were operating efficiently.

Formulation of the quality of service monitoring regime

The ACCC has reported on the quality of services provided by airport operators at Melbourne, Brisbane and Perth airports since 1997–98, Sydney airport since 1998–99 and Adelaide, Canberra and Darwin since 2002–03.

The PC considered that modified quality monitoring arrangements should continue to apply at all price-monitored airports. It considered that the list of quality-monitored services should be reviewed to match those services subject to price monitoring and to ensure that monitored services are within the direct control of the airport operator. The PC noted that for instance, ‘check-in, customs and immigration, cargo processing and on-time airline services are not the sole responsibility of airport operators’ because of other organisations’ involvement, ‘yet the services they provide can affect the services provided by airport operators’. The PC provided the example of aircraft delays, which ‘can be affected by factors beyond the control of airport operators and passenger perceptions of delays can be influenced by customs processing.’⁹⁶ The Government supported the PC’s recommended approach but noted that benchmark comparisons between airports would be facilitated by an overall view of service quality. The ACCC would continue to publicly report quality of service outcomes such as the results of passenger and airline surveys.

The PC considered that the public reporting of quality of service outcomes was a positive feature of the monitoring process and could encourage airport operators to improve service quality, as well as form a basis for improved consultation and negotiation between airport operators and users. It also considered that comparisons of airport ratings among airports could facilitate competitive pressure among operators to improve service quality.⁹⁷

Part 8 of the Airports Act requires the ACCC to monitor and evaluate the quality of airport services and facilities against certain indicators that are prescribed by regulations made under s. 153 of the Airports Act and by ‘such other criteria as the ACCC determines in writing’.⁹⁸

Part 8 of the Airports Regulations 1997 sets out a number of prescribed performance indicators which the ACCC uses to monitor and evaluate the quality of airport services and facilities of particular airports. They include several objective or ‘static’

⁹⁶ Productivity Commission, 2002, p. 267.

⁹⁷ Productivity Commission, 2002, p. 271.

⁹⁸ Subsection 155(1) of the Airports Act.

indicators about the number, availability and adequacy of particular facilities; and a number of subjective satisfaction ratings by airport users (airlines and passengers). Generally, the regulations require that Brisbane, Melbourne, Perth and Sydney airports provide more, or more detailed, information than Adelaide, Canberra and Darwin airports. In particular, Adelaide, Canberra and Darwin airports are not required to conduct passenger surveys.

Following the outcomes of the PC's review and comments made by the PC in its report about the existing quality of service monitoring arrangements,⁹⁹ the ACCC reviewed the indicators it used in its quality monitoring in consultation with airports and other stakeholders, including DoTARS.

As a result of this process, the ACCC introduced additional measures of service quality in its monitoring regime. In particular, a number of 'objective measures' were introduced to complement the (largely subjective) surveys of airport users' perceptions. Basic measures of number, or size, of facility are converted to indicators of adequacy or quality of service (e.g. by expressing as an amount per passenger at peak hour).

The result of this consultation is the ACCC publication, *Guidelines for quality of service monitoring at airports*.¹⁰⁰ The guidelines and an accompanying template provide the details of information that airports are asked to supply to the ACCC. The regulations have not yet been updated to reflect the new requirements developed by the ACCC's review.

The issue of whether the indicators reflect factors which are within the control of airport operators is discussed at pages 14-15 of the guidelines. It is noted that there are relatively few significant airport services that are totally under the 'direct control' of an airport operator given the interaction between different processes at airports, but, as owner of the head lease for an airport, an airport operator is in a position, and has some responsibility, to at least influence the standard of services.

2.5.2 How the ACCC has carried out its monitoring role

The ACCC considers that the main purpose of its monitoring function in relation to airports is to show trends over time in the indicators of prices, costs and profits and quality of service. Some airports have expressed the view to the ACCC that its price monitoring reports should include only pricing and financial information for the year under review and possibly one prior year for the purpose of referencing annual increases or decreases. However, the ACCC considers that this would remove data on trends over time and exacerbate further the dangers in looking at a short time frame, given the long life of the main aeronautical assets.

Price monitoring

The ACCC presents indicators which measure prices, costs and profits of aeronautical and aeronautical-related services, as well as some total airport measures, over a time series in order to illustrate any trends in the measures. No attempt is made to form a

⁹⁹ Productivity Commission, 2002, pp. 265–271.

¹⁰⁰ These guidelines are available on the ACCC's website at <http://www.accc.gov.au>

judgement about whether the levels of these indicators are at efficient or appropriate levels. Quite simply, the monitoring data collected do not provide adequate information to justify such assessments.

This approach reflects what is possible under the existing monitoring arrangements and is consistent with the ACCC's approach to monitoring other goods and services under the prices surveillance provisions. It also reflects the 'light-handed' regime established by the Government.

In particular, the profitability measure, which attempts to reflect the rate of return on assets, is affected by the valuations put on those assets by the airport operators. No assessment is made by the ACCC as to whether such revaluations are justifiable in the context of its monitoring role. In the case of airports, asset valuation is often complex and contentious. Therefore, the ACCC has not drawn any conclusions in its reports as to whether the reported levels of profitability meet the Government's review principles and in particular whether evidence exists to suggest airports generate revenue ('currently' and 'in the future') significantly above the 'long-run costs of efficiently providing aeronautical services'.

Indicators used

Aeronautical and total airport measures

The ACCC does not separately monitor non-aeronautical services, other than those non-aeronautical services which have been defined by the Government as aeronautical-related. As a result the ACCC does not report on the prices, costs and profits of specific non-aeronautical services.

However, the ACCC has considered it appropriate to include information on total airport revenue, costs and profitability for a number of reasons. Most notable are the difficulties that exist in allocating costs and revenues between aeronautical and non-aeronautical services and the complementarity between airport services.

The subjectivity inherent in any basis of cost allocation between aeronautical and non-aeronautical services was acknowledged by KPMG in its 2001 report to the ACCC, which was used by the ACCC as part of its submission to the PC's inquiry into price regulation of airport services.¹⁰¹ The UK Competition Commission also considered that there were practical difficulties in allocating either assets or costs between aeronautical and commercial activities and considered that some judgements would be arbitrary.¹⁰²

The difficulties that exist in allocating costs and revenues between aeronautical and non-aeronautical services are illustrated by the fact that Canberra airport classifies all terminal revenue, operating expenses and assets as non-aeronautical in its accounts, due to difficulties associated with separating the non-aeronautical components from

¹⁰¹ KPMG Consulting, *Review of Airports' Regulatory Accounts*, May 2001, p. 6.

¹⁰² Competition Commission, *BAA plc: a report on the economic regulation of the London airports companies (Heathrow Airport Ltd, Gatwick Airport Ltd and Stansted Airport Ltd)*, November 2002, pp. 58–61.

the aeronautical. As a result, the total airport measures used in the price monitoring report are of increased importance in the case of Canberra airport.

In addition, some aeronautical services are included by airports as non-aeronautical. For example, Brisbane, Perth and Sydney airports include the revenue they derive from aircraft refuelling as non-aeronautical.

The complementarity between airport services was acknowledged by both the PC, in its 2002 report, and the National Competition Council, in its *Final Recommendation—Application by Virgin Blue for Declaration of Airside Services at Sydney Airport*.¹⁰³

The UK Competition Commission considered that BAA's rental and other commercial revenues would not be generated without aeronautical facilities.¹⁰⁴ It considered that demand for use of commercial facilities is to a large extent dependent on the use of aeronautical facilities and that there was unlikely to be any aeronautical investments that generate increased capacity and throughput that do not also generate increased commercial revenues.¹⁰⁵

Based on information in airports' financial statements and operating statistics, the ACCC has therefore also reported on total airport revenues, costs and margins, as well as overall airport rates of return for a given year. These indicators are generally derivable from publicly available data.

The ACCC recognises that the 'total airport' measures reported in the price monitoring report include some activities which are not closely related to the airport business and are not necessarily complements to the core aeronautical business of airports. In particular, business parks and direct factory outlets appear to be more dependent on the local economy than on the aeronautical business of an airport and also are likely to operate in competitive markets.

The ACCC is concerned, for the reasons expressed above, that reliance on aeronautical measures alone in the current regulatory regime does not adequately represent the aeronautical and aeronautical-related business of the price-monitored airports. If the ACCC was to report solely on aeronautical and aeronautical-related services, the ACCC considers that a number of changes to the regulatory regime would be required. These changes would include consideration of the definition of the 'aeronautical till', a stricter form of accounting separation between the 'aeronautical till' and the 'non-aeronautical till', and appropriate legislative powers to enforce such an accounting separation.

In its issues paper (p. 25), the PC asks

Has the current divergence of definitions of aeronautical services in the Airports Act and in the Directions made under the TPA given rise to concerns additional to the fuel throughput levy issue? As part of the foreshadowed alignment of definitions, how might these concerns best be overcome?

¹⁰³ National Competition Council, *Application by Virgin Blue for Declaration of Airside Services at Sydney Airport Final Recommendation*, November 2003, pp. 70–74.

¹⁰⁴ Competition Commission, 2002, p. 4.

¹⁰⁵ Competition Commission, 2002, p. 50.

The ACCC has previously provided views to DoTARS on the definition of ‘aeronautical services’ contained in the Airports Act: in a submission to DoTARS’ review of the Airports Act¹⁰⁶ and in further advice to DoTARS. In summary, the ACCC’s views on the definition of ‘aeronautical services’ are:

- The ACCC supports aligning the definitions of ‘aeronautical services’ contained in Direction 27 and in the Airports Act. Given that Part 7 of the Airports Act has been seen as a complement to prices monitoring under Direction 27, it is logical to remove any discrepancies in the definitions.
 - This would avoid the need for adjustments to allow matching. It would also reduce uncertainty caused by the current minor differences in wording, even where no substantive difference is intended.
 - The ACCC supports the concept of removing the definition of aeronautical services from Direction 27 and instead including a reference to the definition contained in the Airports Regulations.
 - This approach would remove the ‘clause 3 exemption’ which excludes from the definition of aeronautical services those services provided under former FAC contracts. The effect of this clause is to exclude information relating to services which are functionally aeronautical and in the supply of which airports have market power, such as aircraft refuelling services (discussed in section 2.1.2 of this submission).
- The ACCC considers that all services (including aeronautical-related services) currently contained in Direction 27 should be retained in any future definition of aeronautical services. These groups of services have been considered to be associated with varying degrees of market power, but all have been considered to be associated with market power considerable enough to warrant monitoring. (The ACCC’s comments in relation to landside passenger access services are contained in section 2.1.2 of this submission.)

The PC also asks

More broadly, has the operation of the dual till arrangements given rise to unforeseen consequences, or to implementation problems, that cannot readily be addressed through ‘fine-tuning’ the arrangement? How do the costs of any unforeseen consequences and implementation problems compare to the likely costs of a return to a single till approach? Are there any lessons to be learnt from recent overseas experience in this area?

The operation of dual till (and ‘triple till’ with the separate category of ‘aeronautical-related’ services) arrangements for monitoring purposes has given rise to the problems identified above, in reporting solely on the monitored services. These are caused by the difficulties that exist in allocating costs and revenues between the different ‘tills’ (and especially in relation to joint costs) as well as the complementarity between airport services.

¹⁰⁶ Australian Competition and Consumer Commission, *Submission to Department of Transport and Regional Services Review of Airports Act 1996*, February 2003.

As stated above, to attempt to overcome these problems for the purpose of monitoring would require the introduction of stricter accounting separation arrangements between the monitored and non-monitored services, together with appropriate legislative powers to enforce such an accounting separation. However, the subjective nature of many of the allocations required would remain.

A single till arrangement, in the context of regulated prices, involves determining a rate of return for the airport as a whole, and then setting prices for aeronautical services to meet that target rate of return. In contrast, a dual till methodology involves defining aeronautical services, identifying the costs attributable to the provision of aeronautical services, and setting prices on the basis of those costs.

The ACCC reviewed the single and dual till approaches to setting aeronautical prices in its 2001 aeronautical pricing proposal decision for Sydney airport. The ACCC noted:

... [the single-till approach] ensures that airport operators earn a reasonable return on total assets, while preventing them from exploiting their market power. Furthermore, it is practical to apply, as airport operators are free to recover costs through any charging structure they deem suitable. Cost allocation issues therefore do not arise in the context of aeronautical pricing. The Commission does have concerns, however, regarding the price signals faced by airport users and, in particular, the investment incentives faced by airport operators under the single till approach.

The dual till approach to pricing aeronautical services provides certain important advantages over the single till approach traditionally applied by regulators. Most importantly, SACL would face significantly better signals for investment into contestable non-aeronautical services. Furthermore, the Commission has sympathy with the view put by SACL that a dual till approach is effectively adopted in most other regulated industries and no compelling reasons have been provided for deviating from this practice in relation to airports.

The Commission's endorsement of the dual till approach to pricing is qualified by its concerns relating to allocative efficiency and market power. ... these are not concerns about the dual till methodology *per se*. Instead they primarily relate to SACL's *application* of the dual till methodology. The Commission considers that the allocative efficiency and market power disadvantages associated with SACL's proposed aeronautical prices would not arise if the extent of SACL's market power was clearly limited to aeronautical services.¹⁰⁷

Since the ACCC's 2001 Sydney airport pricing decision and the PC's 2002 inquiry into the price regulation of airport services, there has been significant debate in the United Kingdom (UK) on whether a single or dual till methodology is most appropriate for airport price determination.

In its 2002 recommendations to the UK Competition Commission (UKCC) on Manchester, Heathrow, Gatwick and Stansted airports' price caps, the UK Civil Aviation Authority (CAA) advocated a shift to a dual till approach (in which prices would be set on a stand-alone basis using a revised regulatory cost base (RRCB) which comprised the costs of monopoly airport services). In particular, the CAA stated:

¹⁰⁷ Australian Competition and Consumer Commission, *Sydney Airports Corporation Ltd. Aeronautical Pricing Proposal – Decision*, May 2001, p. 83.

The over-arching position, however, is that all users object to any move away from the single till, while the airports support it. If the move only had the effect of shifting rents, this split of views would be easy to comprehend. However, the CAA's view takes investment incentives as central and considers that the RRCB gives significantly higher powered incentives to develop new capacity.¹⁰⁸

The UKCC did not accept the CAA's recommendation for a dual till methodology. The UKCC outlined a number of reasons why it was not appropriate to determine price caps at the UK airports using a dual-till methodology, including:

(a) There is no evidence that the single till has led to any general under-investment in aeronautical assets at the three BAA London airports in the past, nor any expectation that it will do so over the next five years (see paragraph 2.122).

(b) It is not clear that the dual till, as opposed to the single till, would be likely to lead to significantly better aeronautical investment in the future and in some respects is likely to be worse (see paragraph 2.122).

(c) The dual till could improve the efficient utilization of capacity, but the benefits are unlikely to be more than marginal even at Heathrow, where they would not occur until Q5 (see paragraph 2.141).

(f) It is difficult sensibly to separate commercial and aeronautical facilities. Commercial revenues at the three BAA London airports cannot be generated without aeronautical facilities: they should therefore be regarded as one business (see paragraph 2.170).

(h) We believe that average fares would be affected at both congested and uncongested airports if airport charges were to be higher at the three BAA London airports as a result of a switch to a dual-till regime, and we do not think that effect can be justified where it arises from application of dual-till regulation with little or no offsetting benefits (see paragraph 2.197).¹⁰⁹

In summary, the debate over whether a single till or dual till approach should be used in the context of regulatory price determinations centres on the difficulties of sensibly separating commercial and aeronautical facilities on the one hand, and concerns about investment incentives, on the other. In the context of unregulated aeronautical prices, where prices are merely monitored, this concern about the effect on investment incentives may not be as relevant. Therefore, the ACCC considers that there are not strong arguments, if its monitoring responsibilities are to continue, from departing from its practice of monitoring both aeronautical (and aeronautical-related) activities, as well as the total airport activities.

The ACCC considers that there are no single measures that can appropriately measure the prices, costs and profits of aeronautical services. Therefore a variety of measures have been employed in the price monitoring report, including a number of descriptive measures, to examine the airports' charging and profitability.

¹⁰⁸ Civil Aviation Authority, *Heathrow, Gatwick, and Stansted Airports' Price Caps, 2003-2008: CAA recommendations to the Competition Commission*, February 2002, p. xxii.

¹⁰⁹ Competition Commission, *BAA plc: a report on the economic regulation of the London airports companies (Heathrow Airport Ltd, Gatwick Airport Ltd and Stansted Airport Ltd)*, November 2002, p. 62.

Prices

The ACCC uses ‘aeronautical revenue (adjusted)¹¹⁰ per passenger’ as the primary measure of aeronautical prices.

As noted above, the definition of aeronautical services under the Airports Act and direction 27 differs and the classification of some revenue items has also changed over time. Therefore, in order to obtain a consistent measure across time, aeronautical revenue has required some adjustments.

The ACCC has in general excluded new revenue earned from the provision of terminals formerly operated by Ansett from the adjusted measure of aeronautical revenue. Following the demise of Ansett in 2001, operation of Ansett terminals was transferred to the airport operator and revenue derived from such operation now falls within the definition of aeronautical. However, historically, terminal lease revenue has been classified as non-aeronautical and therefore, the ACCC does not have detailed historical data on revenue generated from the Ansett-operated terminals.¹¹¹

Total aeronautical revenue is also shown in the price monitoring report, as a way of illustrating revenue growth from aeronautical services over time. This is an unadjusted measure.

Both an adjusted and unadjusted measure of aeronautical revenue per passenger are reported. While the adjusted measure may be more relevant to reflect movements in the average cost to airlines of using aeronautical services, the unadjusted measure may better reflect changes in average revenue earned by the airport. The effect of the adjustments is that the quoted increases in aeronautical revenue (adjusted) per passenger will be the same or lower than the increases in aeronautical revenue per passenger.

Some airports have criticised use of ‘aeronautical revenue (adjusted) per passenger’ on the basis that growth in non-passenger based revenue streams (i.e. not levied against airlines, but against general aviation and freight operators) is included, even though passengers are not the revenue driver.

The ACCC has considered alternative ways in which the price of aeronautical services could be measured.

Ideally the ACCC would use a direct measure of prices, in the form of a price index. However, there are a number of complexities involved in constructing such indexes. Moreover the ACCC currently lacks the information necessary to compile price

¹¹⁰ The adjusted measure of aeronautical revenue does not include all services defined as aeronautical in direction 27. In general, new revenue earned from terminals formally operated by Ansett has been excluded in order to present a consistent time series. No adjustments have been made to aeronautical revenues for Brisbane, Darwin and Sydney, because they generated domestic terminal revenues prior to 2002–03. No adjustment has been required for Canberra because it does not include terminal revenue in its reported aeronautical revenue.

¹¹¹ Under the Airports Act and the ACCC’s associated guidelines, airports are not required to disaggregate non-aeronautical revenue into component parts, as they are for aeronautical services.

indexes and there are issues such as bundling of charges, which make construction of price indexes problematic.

Since airport charges are levied on different bases—for example, some charges may apply on a per passenger basis, and others by aircraft weight—the price of using an airport cannot simply be measured by adding up the different charges in place at a given point in time. Furthermore, airports may offer discounts for certain periods or to certain users, or there may be minimum and maximum charges in place, which affect some users but not others.

It is generally accepted that there is no clearly superior single means of aggregating various prices which measures all aspects of price changes.¹¹² The price changes for particular airport users may vary depending on the composition of the airport services they utilise, the times at which they use them, and so on. For example, the cost to an airline of landing a domestic flight are likely to be different to those associated with landing an international one, due to differing security and processing requirements and other factors.

Under the previous price cap regime, a measure of the weighted average change in prices, with the weights based on the revenue share of each service in the preceding period, was used to measure changes in price. This is a complex approach, however, estimating an average charge over a fixed time period, with a significant number of adjustments required for matters such as new services or charges, changes to the basis of charging, the introduction of GST, and ‘pass-throughs’ for items such as security costs and new investment.

Where possible, the ACCC has reported on the percentage change in list prices for aeronautical services. This information was not reported under the previous price cap regime and therefore, any time series analysis could only commence from 2002–03. As such 2002–03 has been taken as the base year, with 2003–04 being the first year that any change in prices is reported in the price monitoring report. For many of the airports, these tables serve to highlight the difficulties faced by the ACCC in attempting to construct a price index for aeronautical services on the basis of the information currently available to the ACCC.

Aeronautical revenue (adjusted) per passenger has the advantage of providing a consistent service definition, as well as a measure of the cost to airlines expressed in terms of the most significant charging unit. A further advantage of this measure is that it is likely to most closely reflect the average cost of airport services to the ultimate user of those services, the consumer.¹¹³

The measure of aeronautical revenue (adjusted) per passenger does not differentiate between domestic and international passengers, for whom the average revenue may vary. A precise measure of average revenue for domestic passengers and for international passengers is difficult to construct given gaps and discontinuities in the

¹¹² For a detailed discussion of issues associated with measuring price changes, see Australian Bureau of Statistics, *Analytical Framework for Price Indices*, 6421.0, 1997.

¹¹³ The extent to which changes in the costs of airport services will be passed on to consumers will depend upon the extent of competition in airline markets, which may vary from case to case.

historical data from airports. Additional information would be required to construct these measures.¹¹⁴

Aeronautical-related services

Direction 27 defines aeronautical-related services as landside vehicle access to terminals, landside vehicle services, check-in counters and related facilities and aircraft light and emergency maintenance and buildings. Direction 27 lists public and staff car parking (but not valet car parking) and taxi holding and feeder rank services on airport as specific landside vehicle services. Airports only report revenues and costs against the specific landside vehicle services listed and as such there may be other charges levied for landside vehicle services, such as from car rental firms, which are reported as non-aeronautical.

Costs and profits

As with measures of price, there are a number of ways in which the profitability of aeronautical services using historical accounting data can be measured. A number of measures are presented in the price monitoring reports in order to provide a holistic view of profitability.

Aeronautical operating margin per passenger is defined as aeronautical revenue per passenger (i.e. aeronautical revenue (unadjusted) divided by number of passengers) less aeronautical operating expenses per passenger (i.e. aeronautical expenses excluding interest, tax and amortisation expenses divided by total passengers).¹¹⁵ Total airport operating margin is also calculated and is defined as total airport revenue less operating expenses (total expenditure excluding interest, tax and amortisation expenses).

Operating margins provide a measure of airport operating performance, as distinct from financial performance. In this respect, the measure can provide a consistent approach to revealing trends in operating performance over time and a comparison of the relative performance of airports.¹¹⁶

This measure of profitability, however, does not take into account the full capital cost associated with the provision of services, as it makes no allowance for a return on capital. Since it also includes non-cash items such as depreciation, neither does it provide a measure of net cash flow from airport operations.

Most analyses of profitability focus on rate of return measures. The advantage of these indicators is that they adjust for the amount of capital invested in providing the services and thereby in generating profits for the airport owners.

¹¹⁴ For example, airports are only required to provide information on the total tonnes landed each year, without differentiating between international and domestic traffic. In some cases this latter decomposition may not be available. A similar breakdown of revenue would also be required, which may not be available for all airports.

¹¹⁵ Operating margin is also sometimes defined as operating profit as a percentage of revenue.

¹¹⁶ Comparisons between airports may also need to take into account different operating conditions.

There are a number of factors that are relevant to understanding what measure of return (or profit) is being used and what constitutes the base to which that return is compared. Two common types of measures of rate of return are return on assets and return on equity. Within each of these broad groupings, there are a number of alternative measures. For example, the returns may be pre- or post- tax, or they may include or exclude interest expenses and/or depreciation and amortisation.

The use of return on equity (i.e. profit (loss) after tax divided by total shareholder equity) as a measure in the ACCC's 2002–03 report highlighted the unusual shareholder arrangements in place at the majority of Australian airports, when compared with publicly listed companies. Shareholders at these airports are, generally speaking, also significant debt holders. This means that some of the reported interest expense accrues to shareholders as interest income, rather than as expected dividends or capital growth, as would be the case if it took the form of equity.

Return on equity is intended to represent the returns on investment being earned by those who have invested capital in the firm. In the case of the price-monitored airports, it is clear that this measure does not appropriately capture this concept. The results generated from the return on equity measure appear to show that shareholders have been consistently earning significant negative returns on their investment, or holding negative levels of equity, while being solvent. The low base of shareholder equity at these airports results in extreme and variable rates of return on equity. However, the airports have generally been earning positive profits as EBITDA. The ACCC therefore considers this measure to currently be of limited value in relation to the price-monitored airports.

Given the problems in using a return on equity measure for these airports, the ACCC considers that earnings before interest, tax and amortisation (EBITA) on the average value (of opening and closing balances) of tangible non-current assets (EBITA on average tangible non-current assets) is a relatively more useful indicator of an airport's rate of return and its operating performance. This is consistent with the approach taken by KPMG in its 2001 report to the ACCC.¹¹⁷

EBITA on tangible non-current assets abstracts from management decisions regarding capital structure, which can significantly affect interest expenses and tax payable (and thus post-tax returns), but which does not reflect the operating profitability of providing airport services. Similarly, by using assets as the basis for normalising returns, decisions over capital structure do not affect the ratio used in this measure.

Only *tangible* non-current assets are used in this measure in order to limit the extent to which airport owners' expectations of growth in value (as reflected in goodwill or lease premiums) obscure changes in the profitability of providing services. In particular, lease premiums paid could reflect the expectation of future price and profit increases that take advantage of the airport's monopoly power.

However, notwithstanding the advantages in this measure of profitability, it has the disadvantage of being reliant on the airport operator's valuation of its assets. A number of airports have effected upward revaluations of their assets following

¹¹⁷ KPMG Consulting, *op cit.*, pp. 4–5.

privatisation, which has the effect of lowering the reported return on assets. While such revaluations may be in accordance with relevant accounting standards, such standards allow a variety of accounting treatments.

Quality of service

The ACCC monitors only those facilities and services provided by, or which could be influenced by, the airport operator. These facilities and services include: airside facilities such as runways, taxiways and aprons; terminal facilities, such as international departure lounges, passenger amenities, and baggage claim; car parking; and taxi and bus pick up and drop off points. Domestic terminals owned and/or operated by airlines are not included.

The ACCC has tried to cover in its quality monitoring the range of facilities that are subject to price monitoring. These include both aeronautical and aeronautical-related services as defined in Direction 27 under the Trade Practices Act.

The ACCC draws on information from a number of different sources:

- airport operators
- passengers of the airport
- airlines
- Airservices Australia
- Australian Customs Service (ACS).

Airport operators

Airport operators provide the ACCC with a range of objective data related to the number or size of various facilities. These include the number of passengers at peak hours, the number of aerobridges and the size of gate lounges. The ACCC has converted these numbers and sizes to indicators of adequacy or quality of service, such as the area of lounge per passenger at peak hours, and percentage of passengers using aerobridges.

Passengers

The passenger perception surveys arranged by each airport differ somewhat in their coverage and detail, but all broadly provide the information specified in the regulations and guidelines. The areas covered include passenger check-in, security clearance, government inspection, lounges, washrooms, baggage collection, signage, car parking, and vehicle access for arriving and departing passengers. Surveys at most airports ask respondents to rate their level of satisfaction with facilities on a scale from 1 to 5:

1	2	3	4	5
very poor	poor	average, fair, or satisfactory	good	excellent

There is one main deviation from this approach: Sydney airport uses a global survey conducted by the International Air Transport Association (IATA). The ACCC accepted Sydney airport using the IATA survey because it is an authoritative independent survey by a user group that allows benchmarking against major world airports. Questions in the IATA survey are broadly equivalent, but not identical, to those expected in the Australian regulations. While a consistent methodology across all airports is desirable, the IATA survey does allow international comparisons and there is a time series back to 2000.

The regulations do not require Adelaide, Canberra or Darwin airports to undertake passenger surveys. Accordingly, the ACCC’s guidelines do not require these airports to undertake passenger surveys. Adelaide airport does, however, survey passengers for its own purposes and provides this information to the ACCC voluntarily.

The average ratings for each indicator in the passenger perception surveys are shown for each airport. The average ratings for domestic terminals and international terminals are shown, with a time series to indicate trends, where these data are available.

Airlines

The ACCC conducts a survey of airlines to gain information on their perception of the quality of facilities they use at the monitored airports. The facilities and services covered include:

- airside facilities—runways, taxiways, aprons, aircraft gates and ground equipment sites
- terminal facilities—aerobridges, check-in and baggage handling.

Airlines are asked to rate two aspects of these facilities:

- availability—the availability of infrastructure and equipment and the occurrence of delays in gaining access to those facilities
- standard—the ability of equipment to perform the function intended, the reliability of the equipment and the possibility of it breaking down.

The airlines are also asked to rate the airport operator’s responsiveness or approach to addressing problems and concerns with the above facilities. The scale used for airlines’ ratings, shown below, is essentially the same as that sought for passenger survey responses.

1	2	3	4	5
very poor	poor	satisfactory	good	excellent

Ratings given by airlines are averaged (with equal weights) to give an overall rating for each facility at each airport.

Airservices Australia

Airservices Australia is asked to provide certain data to indicate the adequacy of airport runways to handle the traffic. Airservices currently records a number of measures regarding peak hour arrival performance on a monthly basis at Brisbane, Melbourne, and Sydney airports. The facilities necessary to gather these data have not yet been installed at any of the other airports. Airservices has advised that the next expansion of this system is likely to be to Adelaide and Perth airports; however, the timing of this expansion has not been set.

Airservices Australia's measures relate to the busiest morning peak hour at each of the three airports, generally 7.30–8.30 am, averaged across all days in the month or year specified.

- Demand—the number of aircraft that, once airborne, have an estimated time of arrival within the measured period (morning peak hour).
- Actual arrivals—the actual number of aircraft that land during the measured period. This is always close to 'demand' since demand refers to aircraft already airborne, which will generally land at the destination airport close to the estimated time of arrival.
- Agreed arrival rate—or operationally agreed capacity (OAC), is derived from modelling and expert consensus. It indicates the maximum number of aircraft that can land at the airport within the measured period. This varies for several different runway modes and depends on weather conditions.
- Peak demand within hour—demand for that part of the hour where demand equals, or exceeds, the agreed OAC, expressed as a pro-rata hourly rate.
- Maximum pro rata arrival rate—the highest arrival rate achieved for the part of the measured period where demand did equal or exceed the agreed OAC, expressed as a pro rata hourly rate.
- Average system delay—the average of all airborne delay experienced by those aircraft that land during the measured period. This is the difference between the estimated time of landing after the aircraft becomes airborne and the actual time of arrival. 'System delay' covers all reasons for delays such as airspace limitations, weather, arrival clustering, air traffic control, air crew operations, and airport infrastructure limitations, but it does not reflect delays at the airport from which the aircraft left. The data currently collected does not apportion the reasons for delays.
- Maximum system delay—the maximum delay experienced by a flight during the measured period. The maximum delay for a monthly period is not the maximum delay experienced by an individual flight during the whole month, but an average of the maximum delays for all the daily peak hours in the month.

Airservices Australia's measures have been devised as a guide to its own performance in handling air traffic, but do give some indication of airport constraints and therefore the adequacy of runway infrastructure or management. In particular, if demand is consistently close to OAC for the peak hour, it would suggest that there is little spare capacity for increased traffic at that time.

When high demand (relative to OAC) is combined with consistently long system delays, it is an indication of capacity constraints. However, where the peak demand is limited to a short period, it would not necessarily point to the need to expand the infrastructure as other measures to spread the demand more evenly could be more appropriate.

The full extent of capacity constraints cannot be seen from these data, because the agreed arrival rate has already been limited by constraints such as airport infrastructure. Potential economic demand in excess of capacity, which might, for example, indicate the need for new infrastructure may therefore not be observed in these data. Airlines may not attempt to or may not be permitted to schedule extra aircraft when capacity is clearly limited.

Australian Customs Service

The ACCC conducts a survey of ACS, asking it to rate facilities in the following areas provided by airports:

- arrivals (immigration)—adequacy of areas for circulation and queuing, signage, lighting, desks and passenger facilities (e.g. seating, toilets)
- arrivals (baggage inspection or examination area)—adequacy of space to avoid congestion, signage, provision for passenger privacy, appropriate access and security, passenger facilities and inspection facilities
- departures (immigration)—adequacy of circulation space to avoid congestion, signage and appropriate provision of desks.

ACS is asked to give separate ratings for each area for:

- adequacy—the space and facilities made available for its operations, covering the amount of space provided; and the likelihood of congestion and delays in passenger processing
- standard and condition in which it is generally maintained.

ACS is also asked to rate the airport operator's responsiveness or approach to addressing problems and concerns with the above facilities.

The ACCC presents the results of the above indicators of quality of service in time series charts, in order to show any trends over time. For some indicators, the ACCC has data going back to 1997–98; for other measures, the time series begins from 2002–03.

In the 2004–05 report, the ACCC showed overall airport ratings since 2002–03. These overall ratings were derived by aggregating all of the results obtained for each airport. The average rating for each category of indicator (i.e. passenger, airline and ACS ratings and objective indicators) were weighted by the number of observations in each category. The objective indicators were converted to the same 1-5 rating scale used in the other surveys by taking the average of the results obtained for each indicator across airports and constructing quartiles in order to rate performance of each objective indicator. These overall ratings were also split between indicators relevant to availability of facilities and those relevant to the standard of facilities. These

overall ratings are designed to facilitate competitive pressure among operators to improve service quality, consistent with comments made by the PC in its 2002 report.

2.6 Asset valuation

2.6.1 Introduction

The terms of reference require the PC to ‘review aeronautical asset revaluation practices ... at each of the price monitored airports and advise on improvements that would be consistent with the Government’s Review Principles’.

In its issues paper (p. 25), the PC recognises that asset valuation can have a significant effect on measured airport profitability and that land valuation has been a particularly contentious issue under the current airports regime. In particular, the PC states,

Recently, several of the price monitored airports have claimed that they are entitled to raise their land values in keeping with increases in land prices in surrounding areas, and to reflect those higher values in aeronautical charges.

The PC understands that this practice would run counter to International Financial Reporting Standards which Australia is currently adopting. These specify that assets under an operating lease are not to be re-valued during the term of the lease.

The PC recognises that

there is a wide diversity of views on what valuation approach would best encourage both the efficient use of existing airport services and an appropriate geographic location of those services over the longer term.

But in addition, asset valuations including land, are central to attempts to identify the profitability and rate of ‘return on (appropriately defined and valued) assets (including land)’, as per the PC’s review terms of reference.

In terms of valuing airport land, the PC states (p. 26) that opportunity cost, that is, the value of the airport land in the next best use, is generally required as the approach to value assets in order for efficient use of that asset. However, views vary widely as to what the opportunity cost of airport land dedicated to aeronautical use is in the Australian context of the concession leases. These views have ranged from zero to the value of the land if used for industrial or residential purposes.

In its previous enquiry, the PC considered that regulatory constraints on an airport operator’s options to use or dispose of the land do not alter the *social* opportunity cost of the land. It considered that a failure to price the land on the basis of its opportunity cost would:

- distort signals about consumers’ willingness to pay for airport services, with adverse consequences for the efficient geographic location of those services over the longer term
- potentially result in less efficient use of the land by the airport operator
- put more pressure on non-price rationing mechanisms to allocate scarce airport space, at capacity constrained airports.

The PC stated that several participants in its last inquiry pointed out the practical difficulties involved in estimating the opportunity cost of land, including the problems of estimating the necessary site remediation and re-development costs. Indexed acquisition cost was suggested by some as an alternative valuation methodology to be used both for the purpose of setting charges and in order to assess the reasonableness of charges.

The PC also raised the issue of distributional consequences arising from increasing airport charges resulting from revaluations of land according to opportunity cost valuations. However, it stated that it was not clear that such revaluations would necessarily lead to higher ticket prices for the travelling public, especially at capacity constrained airports, 'where prices may already be above costs as a means of rationing available capacity. Moreover, passengers using centrally located airports such as Sydney where land values are high, will often benefit from lower costs in travelling to and from the airport.'

The remainder of this section first discusses the approach that the price-monitored airports have taken to valuing their aeronautical assets and then discusses how such assets should be valued.

2.6.2 The practice of airports in valuing aeronautical assets

At p. 26 of its issues paper, the PC asks

Is there an appropriate degree of transparency in regard to revaluations of the asset base?

Prior to privatisation, the FAC recorded land, buildings and infrastructure, and plant and equipment at cost or board members' valuation. The board members' valuation of 1996 was based on independent and expert assessments of written down replacement value at that date. At 30 June 1997, the board members obtained an independent valuation of land and buildings, where land was valued on the basis of market value for alternative use (capped at light industrial) and buildings were valued on the basis of written down replacement cost. This valuation was not brought to account in the FAC's 1997 financial statements.¹¹⁸

Each of the price-monitored airports valued their respective assets upon acquisition of the airport lease. However, information on these revaluations is limited. There is not sufficient disaggregation in the FAC's annual reports to establish the extent to which the airport operators revalued assets upon acquisition. Moreover, information on the approach taken by the FAC in valuing assets is also limited.

Since privatisation, Adelaide, Brisbane, Canberra and Perth airports have booked revaluations of their aeronautical assets. Melbourne and Darwin airports have revalued their assets; however, they have not booked these revaluations in their regulatory accounts. No revaluations have occurred at Sydney airport since it was privatised in 2001.

Under the current reporting requirements, the price-monitored airports provide to the ACCC information on revaluations of assets in the form of movements of aeronautical

¹¹⁸ FAC, Annual Report, 1997.

and non-aeronautical asset values over the financial year. Airport operators are also expected to keep detailed documentation of the method used to value each class of asset.¹¹⁹

Whether there is an appropriate degree of transparency depends on the use that is to be made of the data. Under the ACCC's current monitoring role, which reports on returns on assets using the airport operators' valuations of assets, there is sufficient transparency. However, if prices were regulated, additional information and judgements about appropriate values for a regulatory asset base (RAB) would be required.

The following provides details of asset revaluations, as reported to the ACCC.

Booked revaluations

While a number of valuation methodologies have been used by the airports in revaluing their assets, depreciated optimised replacement cost (DORC) is commonly used.

Brisbane, Canberra and Perth airports generally employed this method to revalue their aeronautical assets, although at times, some of these airports have used alternative methods, such as directors' fair market value.

Some airports have used different valuation methods for different aeronautical assets; for instance, Brisbane airport has used DORC to revalue aeronautical buildings, runways, taxiways and aprons, while it valued land on the basis of 'the open market value of leasehold land in its existing use'.¹²⁰

The ACCC's price monitoring reports provide details of the changes in tangible non-current assets for aeronautical services, as well as for the total airport, broken down into additions, disposals, revaluations (which also includes transfers) and depreciation.

The ACCC reported that Canberra airport has revalued land by some \$63 million since 1998–99 and aeronautical buildings by around \$45.5 million over the same period. Revaluations of aeronautical assets including land, land improvements and buildings by Brisbane in 1999–00 totalled \$275 million. Perth revalued its assets by around \$110 million and Adelaide revalued its aeronautical land and buildings by \$28.8 million in 1999–00.

¹¹⁹ Three main methods of asset valuation used are historical cost, replacement cost, and opportunity cost. Historical cost is the original cost or outlay involved in acquiring or constructing an asset. Replacement cost is the cost of replacing an asset with an exact duplicate asset. An example of a replacement cost methodology is depreciated optimised replacement cost (DORC), which is the sum of the depreciated replacement cost of the assets that would be used if the assets were notionally reconfigured so as to minimise the forward looking costs of service delivery. Opportunity cost is the value of the asset in its best alternative use.

¹²⁰ Brisbane Airport Corporation Ltd, Financial report 2004, p. 24.

Unbooked revaluations

Darwin airport revalued its assets (including runways, taxiways, aprons, roads, car parks, services, lighting, fences and gates) on December 2002 by \$25.8 million, based on DORC. The valuation of these assets was \$48 million while the written down value was recorded at \$22.2 million. On 30 June 2004 Darwin further revalued land and building assets by \$98.6 million also based on DORC, but the revaluation was similarly unbooked and the written down value \$45.9 million.¹²¹

Similarly, on 30 June 2000 Melbourne airport completed an independent valuation of assets and increased the value of total airport assets by \$63.3 million.¹²² Further, on 30 June 2003 Melbourne airport completed an independent valuation of leasehold land and buildings using DORC, increasing the value of total assets by \$173.9 million. Had the revaluation been booked total airport assets, including this revaluation, would have equated to \$834.4 million.¹²³

The above discussion demonstrates that some airports, over the period since privatisation, have significantly revalued both aeronautical and non-aeronautical assets. Most of these airports have applied the DORC methodology to revalue these assets. Melbourne and Darwin airports have chosen not to book asset revaluations in their regulatory accounts.

Generally, revaluations have an impact on the effective assessment of airport profitability given the monitoring reports currently show a measure of profitability with a return on assets as a reported rate of return. Thus revaluations can have a significant impact on the reported level of returns on assets.

2.6.3 How should aeronautical assets be valued?

The PC asks (at pp. 26-27 of its issues paper)

How is airport land most appropriately valued for charging, monitoring and longer term capacity augmentation purposes? Is the argument that airport land should be priced in line with its value in alternative uses (less conversion and related costs) conceptually valid? Aside from accounting requirements, are there measurement or other constraints that militate against the use of this approach in practice?

How would revaluations of airport land based on its value in alternative uses impact on airport charges and ticket prices at the price monitored airports? To what extent should airports be able to appropriate the benefits of increases in the value of airport land subsequent to the commencement of their operating leases? At centrally located airports such as Sydney—where the pressure on ticket prices from land revaluations might be expected to be greatest—how would likely price increases compare with the lower costs of travelling to and from the airport, relative to those for airports further from the city centre?

The answer to the question of how should aeronautical assets be valued depends critically on the purpose of such a valuation.

¹²¹ Airport Development Group, Annual Report, 2005, p. 44.

¹²² Australia Pacific Airports Corporation, Annual Report, 2001, p .42.

¹²³ Australia Pacific Airports Corporation, Annual Report, 2003, p .41.

The economic value of airport assets to each airport operator is equal to the present value of the expected future net cash flows that an airport operator can generate from those assets. In other words, the value to the airports of their airport assets is the value they expect to derive from those assets from the market for airport services. It would correspond to the amount that a ‘same-minded’ investor would be willing to pay up to for the property right to use the assets (over the same term), if the assets were transferable.

In the context of the current regulatory arrangements applying to airports, in which prices are not regulated and the asset title is a long-term concession lease, the applicability of an externally imposed approach for valuing aeronautical assets is not relevant. Moreover, whatever and however the airport operators value their assets, this is also internally irrelevant; it does not affect what they can charge for services provided by such assets—except in terms of a review of their charges, if measured against their assets. What matters to the airport operators is the return on their investment (at the successful bid price) over the term of the concession lease. But, as noted above, this is not the assessment advanced by the terms of reference for the PC’s review. The rate of return that the terms of reference suggest is based on:

(appropriately defined and valued) assets (including land) commensurate with the regulatory and commercial risks involved, where those assets reflect *efficient* long-run costs.

Thus, the assets and their valuation should represent efficient minimum cost investments. For non-land assets, an estimate of these would be the DORC values for each asset, which should incorporate assets that are efficient in type and capacity.

For existing land assets, these are not produced nor do they physically depreciate. Their value is normally determined as a residual capitalised rent, the (maximum) value of which would be revealed if the land was transferable to another use through open market transactions.

For the airport operators who hold restrictive property rights to the existing land and other airport assets through concession leases, the existing airport land is not available to them for other uses. The property right to the airport land for other uses rests with the Government as owner. In short, if the economic value of existing airport land is determined by opportunity cost, the next best use is not an option for the airport lease holders (strictly, their private opportunity cost is zero). But, an alternative use is an option for the Government as owner, and therefore there is a social opportunity cost. This divergence relates only to existing aeronautical land and is tied to the property rights for the land and the aeronautical services obligations that the concessioned airport operators must supply. Any expansion of airport land for (efficient) aeronautical purposes, purchased from the adjacent property market would of course be valued at ‘market price’ (setting aside any externality effects). Questions that surround the socially most efficient location, size, and scope of an existing airport, especially as they raise questions of the use of the existing airport land can only be properly addressed by comprehensive social cost benefit study with determination of the social opportunity cost of the existing land (at the existing site and alternative sites).

The question of asset valuation in the context of assessment of airport operators’ returns is discussed further in section 3 of this submission.

If airport operators are attempting to ‘explain’ higher aeronautical charges through upward revaluations in land, the question should be asked of the airport operators—On what basis is the land being revalued? If it is to reflect the land’s ‘intrinsic’ value (i.e. the net present value of a stream of expected higher earnings), it *reflects* their perceived future pricing opportunities, rather than shaping them. Alternatively, revaluations may be made to affect the results of profitability measures, such as returns on assets. Either way, the concept of using a valuation of assets to derive or justify prices is circular in an unregulated context.

Implicit in the PC’s question reproduced above is that, if airport operators increase charges ‘on the basis of’ increases in the value of airport land subsequent to the commencement of their operating leases, this represents a transfer of wealth from the users of airport services to the airport operators and is made possible by the market power associated with those airport leases. Whether airport operators should be able to ‘appropriate’ these benefits is a major policy issue. The issue is complicated to the extent that the successful bids for the airport leases included capitalisation of an expected revenue stream of monopoly rents, which was then transferred to the Government treasury.

For monitoring purposes, the ACCC reports using the values of assets as recorded in the operators’ audited financial accounts. As discussed in sections 2.5.2 and 3.2.1 of this submission, the above discussion is one reason why the ACCC is not able to accurately measure the profitability of the airport operators in its monitoring function.

On the other hand, where the ACCC has a role in regulating the charges of natural monopolies, it is required to determine values for the RAB. A RAB is required to be established *independent* of the present value of the expected future net cash flows that an airport operator can generate from those assets, because the regulator is determining those cash flows. This circularity therefore needs to be broken by the use of some other approach to the valuation of assets.

In the case of durable fixed assets that become sunk assets (that is, assets that have a specialised or single purpose and immobile assets), regulators are often directed to allow a return on some positive value for such assets. In as much as these assets generate returns (and can be replaced over time), they have a warranted ‘replacement cost’, which may correspond to what an alternative supplier would need to incur to establish the asset. Estimates of this replacement cost may be made by using methods of valuation such as DORC or more simply indexed historic cost, possibly with some simple form of depreciation.

As stated in the ACCC’s statement of principles for the regulation of electricity transmission revenues,

The DORC methodology divorces the asset valuation from the assumed profile of revenues that an asset may generate. Given this characteristic, the DORC approach is a useful tool in the transition from government ownership to formal regulation by an independent regulator.¹²⁴

¹²⁴ Australian Competition and Consumer Commission, *Statement of principles for the regulation of electricity transmission revenues—background paper*, 8 December 2004, p. 37.

As noted in that decision, at the time the ACCC assumed responsibility for setting the revenues of transmission companies, an alternative approach could have been to adopt the pre-existing book values of those companies and use them as a basis for setting future revenues.

In assessing a price notification from Sydney airport in 2000–01, the ACCC adopted indexed historic cost as a basis for setting the initial RAB for aeronautical land at Sydney airport.¹²⁵

Whatever approach is taken to the valuation of sunk assets for regulatory purposes, where the decision may rest on practical or policy considerations (in the case of government directions), it is important to note that this should be a ‘once-off’ decision only. That is, once it is determined what approach to use to establish a *starting* value for such existing assets, that valuation is adopted for the regulatory period and is not further adjusted. For example, one method that may be used in establishing a starting value for sunk assets is indexed historical cost. Under this approach, the starting values for such assets for the purpose of determining the RAB would be based on their initial historical costs, indexed by a relevant indicator up until the date at which the assets enter the RAB. After that date, there would be no further indexation of such assets, because this would lead to either ‘windfall gains’ or ‘windfall losses’ to the regulated party.

New investment is less problematic from the regulator’s point of view and is usually included in the RAB at cost, subject to a prudential assessment.

2.7 Regulated access to airport services

Part IIIA of the Trade Practices Act provides for a national third party access regime for those facilities that are of national significance and cannot be economically duplicated. The purpose of this regime is to create competition in industries dependent upon that infrastructure. The access regime is designed to cover those facilities which have entrenched monopoly characteristics and that consequently constrain the benefits from increased competition from being achieved elsewhere in the economy.¹²⁶

The following section provides background to the existing (including proposed changes) access regime, which is further discussed in section 4 of this submission.

The access provisions in Part IIIA allow:

- services provided by nationally significant infrastructure to be open for access by third parties through a declaration process
- arbitration of disputes relating to access to these services when the dispute cannot be resolved through negotiation

¹²⁵ Australian Competition and Consumer Commission, *Sydney Airports Corporation Ltd. Aeronautical Pricing Proposal Decision*, May 2001.

¹²⁶ Australian Competition and Consumer Commission, *OECD — Working Party No. 2 of the Competition Committee Roundtable on Ensuring Access to Essential Transportation Infrastructure for New Entrants An Australian Perspective*, January 2006, p. 4.

- determination of the terms and conditions of access up front through court enforceable undertakings
- certification of effective state and territory access regimes.

Declaration with the possibility of subsequent arbitration has been described as ‘default regulation’ in the sense that, ‘regulation, in the form of arbitration by the ACCC, is only engaged upon default of commercial agreement between the parties as to an aspect of access to the service’.¹²⁷

The price-monitored airports are potentially subject to the general access provisions of Part IIIA and the domestic airside service at Sydney airport has been declared. This means that, while the prices charged by the price-monitored airports are not directly regulated, the ACCC may be required to decide on prices (and other terms of access) for aeronautical services if it is called on to arbitrate a dispute under Part IIIA.¹²⁸

2.7.1 Airports-specific access arrangements, 1997–2002

Between 1997 and 2002, as part of the economic regulatory framework established upon privatisation of airports, s. 192 of the Airports Act provided for an airports-specific access regime, in addition to the general access provisions of Part IIIA. The airports-specific access arrangements were introduced as a transitional measure to streamline the access process under Part IIIA, with the intention that airports were to be subject to the Part IIIA provisions on expiration of the airports-specific arrangements.¹²⁹

Under the Airports Act, airport operators were allowed one year from privatisation in which to have an access undertaking accepted by the ACCC. If this did not occur, services at airports were automatically declared by the Minister under Part IIIA for four years. While Melbourne and Perth airports submitted access undertakings under these provisions, neither were accepted, principally because of the inadequacy of dispute resolution procedures and the enforceability of the provisions proposed.

Given that no access undertakings were accepted by the ACCC within the designated period, airport services at all privatised core-regulated airports were declared. The ACCC was required to determine whether particular services were covered by the Minister’s declaration, by applying criteria set out in the Airports Act.¹³⁰ The ACCC

¹²⁷ Virgin Blue Airlines Pty Ltd [2005] ACompT 5, para. 67.

¹²⁸ See Australian Competition and Consumer Commission, *Arbitrations A guide to resolution of access disputes under Part IIIA of the Trade Practices Act 1974*, April 2006, for an explanation of how the ACCC will exercise its dispute resolution powers under Part IIIA of the Act and a description of the provisions of Part IIIA which impose specific obligations on both the parties to a dispute and the ACCC in arbitrating the dispute.

¹²⁹ Minister for Transport and Regional Services and The Treasurer joint media releases, Productivity Commission Report on Airport Price Regulation, 13 May 2002, p. 7.

¹³⁰ Sub-section 192(5) provided that a service can be declared if it: (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.

received two applications for a determination on whether a service is a declared service under s. 192, both relating to Melbourne airport (from Delta Car Rentals and Virgin Blue).

In April 1999, in the Delta determination, the ACCC determined that service roads needed for picking up and dropping off passengers was a declared service. This decision meant that Melbourne airport was required to negotiate with any company that sought access to this service and any party may have sought the ACCC to arbitrate a dispute. However, the ACCC was not required to arbitrate a dispute.

In the Melbourne airport multi user domestic terminal case, the ACCC used its discretion not to make a determination that the terminal be covered by the Minister's declaration, because charges for the terminal were price regulated and it was not clear that a determination would promote competition.

On 6 September 2003, s. 192 was repealed by the *Civil Aviation Legislation Amendment Act 2003* and airports are now potentially subject to the general access provisions in Part IIIA of the Trade Practices Act.

2.7.2 Access to airport services under Part IIIA of the Trade Practices Act

Access to airport services has been sought under the general Part IIIA provisions in two cases: the Australian Cargo Terminal Operators Pty Ltd (ACTO) case in November 1996; and the Sydney airport case in October 2002.

Under Part IIIA, a party may apply to the National Competition Council (NCC) for declaration of a service. In order to declare a service, the NCC must be satisfied that:

- access is needed to promote competition in related markets
- it would be uneconomic for anyone to develop another facility
- the facility used to provide the service is of national significance
- the service is not already covered by an access regime.

The NCC is also required to consider public interest issues, including health and safety.

The declaration of ground handling services at Sydney and Melbourne airports

In the ACTO case, ACTO was a small business which provided independent cargo terminal services to international airlines. It sought access to various freight handling and related services provided by facilities owned, at the time, by the FAC at Melbourne and Sydney airports. ACTO was joined in its application by South Pacific Airmotive Ltd (SPAM), a provider of passenger and ramp handling services, and International Business Management Services Pty Ltd (IBMS), a provider of catering and ramp handling services. Up until 1996, ground handling services for airlines at these airports had been controlled by the two major domestic airlines, Qantas and

Ansett Airlines. The services were considered by some to be highly priced and of a poor standard.¹³¹

The NCC's role under Part IIIA is to make a recommendation to the Minister as to whether a service should be declared. In the ACTO case, the NCC found that the services provided by the freight aprons, stands and freight moving and equipment storage qualified for declaration. It did not recommend that land for constructing cargo terminals be declared, because ACTO could build cargo terminals off airport. The NCC recommended that the services be declared at Sydney airport for five years and at Melbourne airport for a period to expire 11 months after the airport was leased. The Treasurer accepted the recommendations and made the declarations in July 1997.

The decision of the Treasurer is subject to review by the Tribunal and the FAC applied for a review. The application was taken over by the Sydney Airports Corporation and heard in December 1998. The Tribunal upheld the declaration, making only minor amendments to clarify the service description.

It is understood that following declaration of airport services required to provide ramp handling services, Sydney airport provided space for SPAM and IBMS to operate their ramp handling services. The ACCC was not required to arbitrate any disputes.

The declaration of airside services at Sydney airport

On 1 October 2002, Virgin Blue applied to the NCC for declaration of the airside service at Sydney airport. The airside service was defined as a service for the use of runways, taxiways, parking aprons and other associated facilities (Airside Facilities) necessary to allow aircraft carrying domestic passengers to:

- take off and land using the runways at Sydney Airport
- move between the runways and the passenger terminals at Sydney Airport.

The declaration application was prompted by a change in the charging basis made by Sydney airport (from a weight-based charge to a per-passenger charge).

On 30 June 2003, the NCC issued a draft recommendation to declare the airside service. However, the NCC's final recommendation, issued in November 2003, was that the service should not be declared, on the basis that it did not meet the criteria that access to the service would promote competition in at least one other dependent market and that access (or increased access) to the service would not be contrary to the public interest. On 29 January 2004, the Minister (the Parliamentary Secretary to the Treasurer) accepted the NCC's recommendation not to declare the airside service.

On 18 February 2004, Virgin Blue (joined by Qantas Airways Limited) applied to the Tribunal for review of the Minister's decision. On 9 December 2005, the Tribunal handed down its decision that the airside service be declared for a period of five years. The Tribunal found that Sydney airport had misused its monopoly power, and that, unless the airside service is declared, competition in the dependent market will

¹³¹ Australian Competition Tribunal, Sydney International Airport, 2000, para. 56.

continue to be affected. It also found that declaration would not be contrary to the public interest.

On 6 January 2006, Sydney airport applied to the Federal Court for review of the Tribunal's decision.

Proposed changes to Part IIIA

Following a review by the PC into the national access regime in 2001, the Government issued its response in February 2004 and introduced the *Trade Practices Amendment (National Access Regime) Bill 2005* into Parliament on 2 June 2005. Following a Senate Economics Legislation Committee report on the Bill and an amendment being introduced to the Bill in the House of Representatives, the Bill has yet to be passed by the Senate.

The main features of the Bill are:

- a new objects clause
- the ACCC would be required to have regard to pricing principles
- the declaration criterion relating to the promotion of competition would be amended to 'would promote *a material increase in competition ...*'
- the NCC would be required to use best endeavours to make its declaration recommendations in four months
- the NCC would be required to use best endeavours to make its certification recommendations in six months and the Minister would be required to use best endeavours to make decisions in 60 days
- immunity from declaration would be possible for government-sponsored infrastructure which is subject to a competitive tender process
- the ACCC would be able to make interim arbitration determinations, backdate final determinations, conduct joint arbitrations and publish arbitration decisions
- the ACCC would be required to use best endeavours to make final determinations in six months
- the Tribunal would have a target time limit of four months to review ACCC arbitration determinations
- declaration would not preclude access undertakings
- the ACCC would be required to use best endeavours to assess undertakings in six months
- undertaking and access code decisions would be reviewable by the Tribunal (with a target time limit of four months).

3 Assessing the effectiveness of the current regime

This section of the ACCC's submission attempts to assess the effectiveness of the regime against the Government's review principles. The outcomes of the ACCC's monitoring activities are first summarised, followed by a discussion against each of the review principles.

3.1 Findings of the ACCC's monitoring

3.1.1 Price monitoring and financial reporting

The last price monitoring and financial report released by the ACCC incorporates data up to 2004–05. Results to that date show the following key results:

- There has been an *upward trend in passenger numbers* since 1997–98, interrupted by a temporary drop in 2001–02. All of the airports' passenger numbers in 2004–05 exceeded 2000–01 levels. Increases in passenger numbers in 2004–05 ranged from 6.9 per cent at Sydney to 17 per cent at Darwin.
- In addition to the growth in passenger traffic, there has been a *strong upward trend over the same period in the ACCC's measure of aeronautical prices— aeronautical revenue (adjusted) per passenger*. In particular, there were substantial increases at all airports following the removal of price regulation between 2001–02 and 2002–03.
 - Increases since 2001–02 range from approximately 50 per cent (Melbourne) to 228 per cent (Darwin). The increase at Sydney of 92 per cent is mostly attributed to an ACCC-approved increase of 69 per cent in 2001–02. Over the three years of price monitoring, the increase has ranged from approximately 13 per cent (Sydney) to 76 per cent (Adelaide).
- The upward trends in passenger numbers and average revenue per passenger are reflected in *strong upward trends in aeronautical revenue* from 2001–02 and 2002–03.
 - Total aeronautical revenue generated by the price-monitored airports increased by 68 per cent to \$656.8 million between 2001–02 and 2004–05. Increases at individual airports over this period ranged from 37 per cent (Sydney) to 163 per cent (Adelaide).
- *Average aeronautical operating expenses since 2001–02 and 2002–03 have generally declined or remained stable*, largely reflecting increases in passenger numbers in the context of costs that are to a large extent fixed.
- These results contributed to *strong upward trends in aeronautical operating margin per passenger at all airports* since 2001–02 and 2002–03. In 2004–05, margins ranged from \$1.52 (Brisbane) to \$5.22 (Sydney) per passenger.
- *Aeronautical-related revenue per passenger has trended upwards* over the three years of price monitoring at Melbourne, Perth, Brisbane and Sydney, while

Adelaide, Canberra and Darwin were more stable. Over this period, the increase has ranged from 1.6 per cent (Adelaide) to 10 per cent (Perth), while decreasing by 3.5 per cent at Darwin.

- In 2004–05, aeronautical-related operating margin per passenger ranged from \$1 (Adelaide) to \$2.05 (Melbourne).
- *EBITA on average tangible non-current assets for aeronautical services has generally trended strongly upwards* over the period from 1998–99, although reported returns for Canberra, Brisbane, Adelaide and Perth airports are affected by significant upward revaluations of assets.

3.1.2 Quality of service monitoring

The ACCC's quality of service price monitored airports report of 2004–05 identified that on a rating scale ranging from very poor to excellent, the *overall ratings of the seven airports ranged from satisfactory to good* over the three-year period from 2002–03 to 2004–05.

Over the three-year period, Brisbane was the top-ranked airport, achieving an overall rating of good. Melbourne, Perth and Sydney airports were generally rated between satisfactory and good, while Adelaide, Canberra and Darwin airports were generally rated as satisfactory. Melbourne airport's rating declined since 2002–03, while Canberra airport's rating improved.

Runway traffic at Sydney airport during the morning peak hour at times equalled or exceeded operationally agreed capacity during 2004–05. The average system delay at morning peak hour at Sydney airport was about five minutes in 2004–05, while the maximum system delay was about 14 minutes. Both results are unchanged from 2003–04. At the two other busiest airports—Melbourne and Brisbane—demand was generally below capacity at peak hour.

Since 1997–98 passengers have consistently rated the international terminals at Brisbane, Melbourne, Perth and Sydney airports as good. Over a shorter time series, passengers have rated the domestic terminal facilities as good for Brisbane, Melbourne and Perth airports and as between satisfactory and good for Adelaide and Sydney airports.

Since 1997–98 airlines have generally rated the airside facilities within the range of satisfactory to good and the international terminal facilities within the range of poor to good. Within these ranges, airlines have rated the facilities at Brisbane and Melbourne airports as better than those provided at other airports. Airlines have generally rated the domestic terminal facilities at all airports as satisfactory since 2002–03, except for Canberra airport, which was generally rated as good.

Since 1998–99, the ACS rated airport facilities at all airports within the range of poor to good, with ratings being more variable compared with other survey responses. The ACS has generally rated Sydney as the best performing airport, rating its facilities as good over the period.

3.2 Assessment of airports' conduct against the review principles

The PC's terms of reference require it to report on whether airport operators have acted in a manner consistent with the Government's review principles. The review principles emphasise the concept of efficiency with a general correspondence to criteria of economic efficiency in terms of allocative efficiency ('efficient prices' with 'revenue not significantly above long run costs', and productive efficiency ('costs of efficiently providing aeronautical services').

Any assessment of the current regulatory arrangements against this 'efficiency ideal' needs to recognise that any regulatory tool considered (across a spectrum from 'heavy-handed' to 'light-handed' to 'none') will be imperfect and involve costs of compliance and distortion, as well as benefits. This is often expressed as the trade-off between imperfect regulations (costs of compliance and distortions) and imperfect markets (costs of abuse of market power). In choosing between alternative regulatory arrangements, policy assessment is a comparison of imperfect regimes and an attempt to gauge the 'least imperfect'. It is inevitable that there will be gaps between the airports' conduct and the efficiency ideal; however, the relevant policy question would seem to be whether the efficiency gaps and compliance costs of the existing regime are smaller than an alternative.

The PC's terms of reference imply that alternatives to the current regime are also to be assessed against the review principles and the Government's other objectives. However, this type of comparison is problematic. For example, under the previous form of price cap regime, ideally excess returns would be low/zero at the beginning of the regulatory period, but are allowed to rise over the period if the excess is achieved through cost efficiencies. Ideally, allocative (demand-side) inefficiencies are minimised and technical efficiencies are promoted by the incentive to retain excess returns achieved through supply-side gains. It follows that using excess returns (or the gap between revenue and long-run costs) alone as a comparison of regimes is not satisfactory—a composite measure of total efficiency is needed.

In addition, the review principles are expressed more in ex ante (forward looking) terms than as ex post (backward looking) assessment criteria. This differs from the usual task of a regulator in determining regulated prices or revenues, which is done on an ex ante basis. An ex post assessment cannot be made with the benefit of hindsight if the purpose is to decide future arrangements. Rather, such an assessment should involve an assessment of the circumstances, expectations, etc, as they existed at the time that relevant decisions were made. This may cause additional difficulties; for example, in determining a rate of return commensurate with risk, judged on an ex ante basis.

With these considerations in mind, each of the review principles is analysed below, including a discussion of the information requirements needed to assess each principle and the extent to which the results of the ACCC's monitoring activities meet these information requirements.

3.2.1 Review principles a) and c) — reasonable rate of return

The PC asks (at p. 17 of its issues paper)

Have increases in charges for airport services under the price monitoring regime been consistent with the efficient operation of airports and the Government's Review Principles?

The Government's review principles relating to efficient pricing are:

- a. At airports without significant capacity constraints, efficient prices broadly should generate expected revenue that is not significantly above the long-run costs of efficiently providing aeronautical services (on a 'dual-till' basis). Prices should allow a return on (appropriately defined and valued) assets (including land) commensurate with the regulatory and commercial risks involved.
- c. At airports with significant capacity constraints, efficient peak/off-peak prices may generate revenues that exceed the production costs incurred by the airport. Such demand management pricing practices should be directed toward efficient use of airport infrastructure and, when not broadly revenue neutral, any additional funding that is generated should be applied to the creation of additional capacity or undertaking necessary infrastructure improvements.

Review principles a) and c) relate to the level of prices and distinguish between airports subject to significant capacity constraints and those which are not. Therefore, a preliminary issue is whether any of the price-monitored airports are currently subject to significant capacity constraints.

In its 2002 final report, the PC identified Sydney airport as the only airport subject to capacity constraints. The PC noted that 'Sydney Airport (at least until the events of September 2001) appeared to have excess demand for slots for several hours of the day.'¹³² However, more recently in the Tribunal's consideration of the Sydney airport case, the Tribunal noted

that *all parties* acknowledged that Sydney Airport did *not* presently face capacity or slot constraints, and it was estimated that there would not be any significant capacity constraints for at least five to ten years.¹³³ (emphasis added)

Therefore, the following discussion focuses solely on review principle a).

This principle is concerned with whether airports have abused their monopoly power by charging prices that are too high. The test involves an assessment of whether the ex post rate of return on aeronautical assets has been 'reasonable' relative to the risks.

This is very similar to the rate of return approach commonly used in 'cost-plus price regulation'—the difference being that the test is conducted ex post, not ex ante. But from a data standpoint, essentially the equivalent information is needed: appropriate aeronautical costs and their treatment in economic terms over time.

Similarly, the historical record of revenue and profit data would need to be considered against aeronautical assets to estimate the actual rate of return. However, this is *not* equivalent to the data received under a monitoring regime, which collects accounting-based data. For example, as already highlighted in this submission, assets

¹³² Productivity Commission, 2002, op.cit., p. 185.

¹³³ Virgin Blue Airlines Pty Ltd [2005] ACompT 5, para. 243.

may be regularly revalued in accordance with accounting standards, but this may not equate to an appropriate economic value to determine actual rates of return.

Additional inputs of information would be needed in order to determine a 'reasonable' rate of return, considered from an ex ante perspective. In particular, it is unclear what is meant to be encompassed by the inclusion of 'regulatory risk'. The simplest interpretation may relate to the likelihood that a future government would replace the 'light-handed' regime without grounds based on the demonstrable exercise of market power. This interpretation is possible, but not highly plausible. Yet other interpretations appear circular—what does it mean to take into account the risk of regulatory change internal to an assessment of whether the regulatory change is warranted? Put another way, if the airport operator can influence by its own conduct the probability of 'unacceptable outcomes', what is the regulatory risk it faces that is beyond its control? The information necessary to analyse this can only be assessed when the meaning of this 'regulatory risk' is clarified.

In order to estimate the long-run costs of efficiently providing aeronautical services, some estimate would be needed of the likely long-term efficient scale of investments in what are lumpy aeronautical assets and a consideration of costs, forecasted traffic levels, and pricing over a corresponding 'long' period.

It is very difficult to interpret higher or lower prices, costs and profits disclosed through a monitoring exercise in terms of principle a). For example, higher prices may arise from higher factor costs and imposed new services or exogenous shocks in demand. The existing monitoring is not designed to directly assess efficiency and productivity. Additional information would be required to construct efficiency measures, such as partial or total factor productivity indicators.

Methodology used by the New Zealand Commerce Commission to assess excess returns

The ACCC considered the approach taken by the New Zealand Commerce Commission (NZCC) in its 2002 regulatory control inquiry into whether charges for airfield activities at the three major international airports should be controlled.

An assessment of the price levels at these airports was part of a larger framework applied by the NZCC in quantifying the benefits of regulatory control at these airports. The NZCC measured the excess earnings of the airports, under which a firm was considered to earn excess accounting profits if its revenues were greater than its costs (including capital costs).

The NZCC estimated excess earnings using historical, current and forecast revenues for these airports. It also estimated the airports' excess earnings under a number of scenarios that applied varying approaches to valuing aeronautical land and specialised aeronautical assets, and the optimal level of land ownership.

While it might appear that measuring the excess earnings of airports is a reasonable framework that could be applied in assessing whether price levels of the price-monitored airports are consistent with review principle a), there are some issues that complicate the interpretation of this measure. These issues are also common to the interpretation of the measures of airport financial performance in the ACCC's price monitoring reports.

The first issue is that a result indicating that a firm's earnings are excessive could be attributable either to increased prices, or to reduced costs. If an airport was to be 're-regulated' on the basis of this result, without regard to the *cause* of the finding of 'excess earnings', it would reduce the airports' incentive to become productively efficient. In effect, it would be similar to rate of return regulation, the disadvantages of which incentive regulation was designed to avoid. This argues for combining any assessment of excess earnings with a consideration of the airports' technical or productive efficiency.

The NZCC identified this as an issue in its 2002 airports regulatory control inquiry, in which it noted that 'what otherwise might be considered excess returns (and evidence of the exercise of market power), may just reflect efficiency gains/superior performance'.¹³⁴ The NZCC attempted to assess the productive efficiency of each of the international airports, but noted that this was difficult to achieve in practice. It noted, for example, that

declining costs over time may simply reflect increasing output in the presence of economies of scale, rather than any improvement in productive efficiency per se.¹³⁵

The second issue is that the excess earnings measure is sensitive to the period over which it is measured, and it only provides a definitive answer on the extent to which the revenues earned by the firm were greater than costs when considered over the entire life of the asset. An assessment of excess earnings over a small part of the life of an airport is subject to myopia and be could misleading, especially if the revenues of an airport over the remaining term of the lease are significantly different from the airport's revenues during the period examined.

A result indicating that an airport's earnings are excessive over just one or a few years during its life could be offset by a future or past period in which its earnings were negative or not excessive. For example, an airport may be under recovering costs due to an adverse shock in demand, or over recovering costs because it is capacity constrained and is generating excess earnings to finance future investment.

For the current inquiry into the price-monitored airports, while the first issue (sources of excess earnings) could be partially addressed by taking a similar approach to the NZCC and examining the costs of the airports, the issue of myopia cannot be avoided given that there exists only three years of information on the revenues earned by the price-monitored airports during the period of light-handed regulation.

Use of price monitoring information

As stated above, the information contained in the airports' regulatory accounts is not sufficient in order to assess whether the airports have complied with review principle a).

¹³⁴ Commerce Commission, *Final Report Part IV Inquiry into Airfield Activities at Auckland, Wellington and Christchurch International Airports*, 2002, p. 226.

¹³⁵ *ibid*, p. 174. Note that the declining unit costs may arise from lumpy indivisible assets (such as a given length runway) that have a large fixed cost element.

Review principle a) requires that the airports not subject to significant capacity constraints generate expected revenues not significantly above the long-run efficient costs of providing aeronautical services. However, the historical accounting data contained in the airports' regulatory accounts is unlikely to represent a reliable measure of the efficient long-run costs of providing aeronautical services. It follows that a comparison of revenue with this information is unlikely to provide a satisfactory indicator of the 'reasonableness' of the airports' prices.

Information on the efficient long-run costs of providing aeronautical services, including efficient operating and capital costs, is required. A component of this is an appropriate approach for the valuation of aeronautical land and other assets, that are relevant to the purposes of the review. Clearly, sound determination of these play a central role in any assessment of the airports' revenues. For example, the results of the NZCC's analysis varied with the approach taken to the valuation of land and specialised assets, as well as the optimisation applied to land.¹³⁶ In addition, the minority view of the NZCC disagreed with the majority's view on the methodology used to value specialised assets, preferring a DORC approach to an historic cost basis. This difference resulted in the minority coming to a different view on whether Auckland airport should be regulated.

Return on concession leases

In order to assess whether airports have earned excess returns, it may be argued that the appropriate asset base to use is the price paid for the assets (and property rights) involved in the sale of the leases. However, excess returns relative to this base would validate whatever level of return and pricing strategy the successful bidders for the airport leases built into their bids; it does not answer the question of whether returns are excessive on *economic efficiency* grounds. Even if this question was pursued on an ex post rate of return basis, it can only be addressed unequivocally for the airport business as a whole. There is no unambiguous economically justifiable way of allocating the amount paid for the lease into aeronautical and non-aeronautical components.

It would seem necessary, therefore, in order to estimate the long-run costs of efficiently providing aeronautical services, to review the asset values in the airports' accounts from an economic standpoint. For example, while a number of the airports have revalued assets on the basis of DORC, the application of DORC, and in particular the optimisation adjustment component, can be very subjective.

Determining an appropriate value for aeronautical land for the purpose of assessing excess returns is even more controversial and is discussed in section 2.6 of this submission.

There are also a number of secondary issues with assessing the price levels of the airports using the historical cost information contained in the regulatory accounts.

¹³⁶ The NZCC adjusted the airports' valuations for land through an optimisation process that included only those assets that are currently 'used and useful'. All other assets were optimised out of the asset base.

As mentioned in section 2.5.2 of this submission, the information reported by the airports in their regulatory accounts does not encompass all the airport services associated with market power. For example, revenue from aircraft refuelling services is not provided to the ACCC, and the ACCC does not have separate details of the assets associated with the provision of aeronautical-related services. In addition, the subjectivity inherent in making allocations between aeronautical and non-aeronautical services in the context of significant joint and common costs, as well as the complementarity between such services, complicates any assessment of excess returns of aeronautical services alone.

For these reasons, the ACCC does not consider that any meaningful conclusions can be made on the question of whether the level of the airports' prices have been at efficient levels, using the results of the airports' regulatory accounts for the three-year period of price monitoring.

International benchmarking

The PC asks (at p.17 of its issues paper)

How do recent increases in charges for aeronautical services at the price monitored airports compare with those at other Australian airports and at comparable airports overseas?

A comparison of price levels for aeronautical services at the price-monitored airports with suitable benchmarks may go some way towards assessing the relative performance of airports.

There exist a number of benchmarking reports which compare the performance of airports and include measures of financial and operational performance. For example, the Air Transport Research Society (ATRS) and Transport Research Laboratory (TRL) prepare annual benchmarking reports that assess the productivity, cost competitiveness, and financial performance of airports. The most recent version of the ATRS report¹³⁷ benchmarks the performance of five of the seven price-monitored airports (Adelaide, Brisbane, Melbourne, Perth and Sydney).

However, it is important that any airport benchmarking control for differences in the way that airports are structured and in the services they provide and how they are contracted. As outlined in a recent review of airport benchmarking:

One of the major problems associated with comparing economic performance is that there is no "typical" airport when it comes to looking at the services and facilities that the airport provides. Beyond the basic operational functions, different airports have little in common. Some airport operators will provide activities such as security, air traffic control, handling, car parking, duty-free shops, cleaning and heavy maintenance, while others will contract these out. In the extreme cases, terminals may also be leased as is the situation on the USA and Australia. All of this will impact on both cost and revenue levels as well as labour/capital productivity.

...Other key factors that may influence the results of benchmarking studies are airport size, since large airports are likely to experience economies of scale, and the nature of the traffic

¹³⁷ Air Transport Research Society, *Airport Benchmarking Report – 2006 Global Standards for Airport Excellence*, 2006.

such as the share of international passengers, as these have higher costs and generate more revenues than domestic passengers.¹³⁸

It is also possible that the approach taken to financial reporting between airports domestically and internationally is inconsistent, which could complicate comparison of airports' financial performance.

For example, the notes to the regulatory accounts indicate that there is some variation in the approaches taken by the price-monitored airports. For example, runways are depreciated over a long period, with Canberra and Melbourne depreciating runways over up to an 80 year period, and Sydney airport up to 99 years. Airports internationally apply a wide range of depreciation schedules; for example, '...the UK airport company BAA depreciates runways for up to 100 years while Amsterdam airport uses 30 to 40 years and the French company Aeroport de Paris uses just 10 to 20 years'.¹³⁹

The ACCC considers that while benchmarking could provide some information on the relative financial and productivity performance of the airports, it is unlikely that such financial benchmarking will provide information on the question of the extent to which the benchmarks themselves, or the price levels of the price-monitored airports are consistent with the review principles.

3.2.2 Review principle b) — the structure of charges

The PC (at p. 18 of its issues paper) asks

How has the structure of charges for airport services changed under the price monitoring regime? Have such changes been facilitated by the more light-handed approach to prices oversight?

While the ACCC does not have information on the charges that are commercially negotiated between the airlines and the price-monitored airports, it does collect information on the list charges for aeronautical and aeronautical-related services under the current price-monitoring regime.

As mentioned by the PC in its issues paper, there is considerable diversity in the structure of charges at the price-monitored airports. Identifying changes in the structure of list prices over time can be complicated by changes in service description, service quality, and the addition of new services. Despite this, it is possible to identify two changes in the structure of list prices that have occurred under the price-monitoring regime:

- a move towards bundling landing and terminal access charges for international RPT services
- a move towards passenger-based landing charges for domestic and international RPT services.

¹³⁸ Graham. A, Airport benchmarking: a review of the current situation, *Benchmarking, An International Journal*, Vol. 12 No. 2, 2005, p. 102.

¹³⁹ *ibid.*, p. 101.

The move towards bundling landing and terminal access charges into a passenger service charge (PSC) occurred at the beginning of the current price-monitoring regime. Brisbane and Melbourne airports bundled landing and terminal charges in the 2002–03 financial year, which was after Sydney airport began to levy a PSC for international RPT services in 2001.

The move towards levying landing charges on a per passenger basis also occurred at the beginning of the current price-monitoring regime. Table 3.1 illustrates the change in the basis of charging for landing between 2001–02 and 2004–05.

Table 3.1 Changes in the basis of landing charges at the price-monitored airports: 2001–02 and 2004–05 (domestic and international RPT services)

Airport	2001–02	2004–05
Adelaide	\$/tonne MTOW	International \$/passenger Domestic has the option of either \$/tonne MTOW or \$/passenger
Brisbane	\$/tonne MTOW	International \$/passenger Domestic \$/tonne MTOW
Canberra	\$/passenger	\$/passenger
Darwin	\$/tonne MTOW	\$/tonne MTOW
Melbourne	\$/tonne MTOW	\$/passenger
Perth	\$/tonne MTOW	\$/passenger
Sydney	\$/tonne MTOW for domestic; \$/passenger for international	\$/passenger

Source: ACCC price monitoring and financial reporting and regulatory reports; Statement of reasons for Sydney airport proposal to restructure charges—August 2001.

Table 3.1 shows that there has been a move from levying landing charges on the basis of \$/tonne maximum take-off weight (MTOW) to \$/passenger at Adelaide, Brisbane, Melbourne, Perth and Sydney airports.

Sydney airport changed the basis of landing charges for international RPT services to a \$/passenger basis prior to the commencement of the price-monitoring regime, in 2001. Canberra, Melbourne, Perth and Sydney airports all levy landing charges for both domestic and international RPT on a \$/passenger basis, while Brisbane airport continues to levy landing charges for domestic RPT services on a \$/tonne MTOW basis. While Adelaide airport levies landing charges for international RPT services on a \$/passenger basis, it provides domestic RPT operators with the option of paying landing charges in a \$/tonne MTOW or \$/passenger basis.

Given that the previous price cap arrangements enabled airports to restructure their charges, it is unclear whether the more light-handed approach to prices oversight has facilitated the bundling of landing and terminal access charges and the move from MTOW to passenger-based landing charges.

The ACCC does not collect information from the airports on their reasoning for the changes to the structure of charging.

As mentioned in the ACCC's price monitoring report, the complementarity between aeronautical and non-aeronautical services raises the possibility of airports bundling

aeronautical services with non-aeronautical services in their negotiated pricing arrangements. Such bundling may include ‘discounts’ on reported aeronautical charges which are counterbalanced by higher charges or additional charges for non-aeronautical services.

The PC (at p. 18 of its issues paper) asks

Is the current structure of charges broadly consistent with the efficient provision of airport services and the Government’s review principles? If not, what changes would be required to deliver more efficient outcomes?

The Government’s review principles provide for price discrimination at the price-monitored airports, where it promotes the efficient airport usage. In particular, review principle b) states:

- b. Price discrimination and multi-part pricing that promotes efficient use of the airport is permitted. This may mean that some users pay a price above the long-run average costs of providing aeronautical services, whereas more price-sensitive users pay a price closer to marginal cost.

The ACCC does not collect all the information necessary to judge existing charges against this principle. In particular, user charges and the structure of charges under negotiated agreements are not provided and may involve elements of bundling of services. Therefore, the following comments are necessarily limited.

As outlined in the PC’s previous inquiry report, price discrimination can improve allocative efficiency as it can reduce the deadweight losses associated with levying uniform prices above marginal costs in circumstances in which marginal cost is below average cost. The previous section of this submission outlined the shift that has occurred in the structure of list landing charges towards passenger-based prices since the introduction of light-handed regulation. The PC noted this move by Australian airports from weight-based to passenger-based charging structures in its previous inquiry. In particular, the PC considered:

Passenger-based charging reduces the scope for price discrimination on some margins (for example, aircraft size), but scope for discrimination remains on others (for example, between passengers travelling on different airlines at different times of day, or between domestic and international passengers).¹⁴⁰

The Tribunal has recently considered the efficiency of passenger-based landing charges in comparison to MTOW-based charges in the Sydney airport case. The Tribunal stated:

In short, we reject SACL’s submissions that the Domestic PSC encourages a more efficient use of Sydney airport than does an MTOW based charge. Efficient pricing of the charges for the Airside Service would require consideration of the cost drivers underlying the provision of those services by reference to the aircraft using those facilities, rather than by reference to the number of passengers travelling in such aircraft. Considerations of capacity or slot constraints at Sydney Airport are not a relevant consideration in the short to medium term and do not, in any event, alter our conclusion that a passenger-based charge in the form presently adopted by SACL does not present a more efficient form of pricing than an

¹⁴⁰ Productivity Commission, 2002, op. cit, p. 91.

MTOW-based charge, nor encourage more efficient use of the Airside Service provided at Sydney Airport.¹⁴¹

The Tribunal also considered the issue of whether a passenger-based charge encouraged airlines to use large rather than small aircraft, thereby arguably encouraging the efficient use of airport facilities by encouraging more passengers per aircraft.¹⁴² It noted:

Mr Schuster expressed the view that weight-based runway charges discouraged the use of larger aircraft as the weight of aircraft tended to increase at a faster rate than the number of passengers carried as aircraft became larger. However, there was no evidence put before us to support this view.

Rather, the evidence was to the contrary, namely that the smaller aircraft operated by LCCs [low cost carriers] brought about a more efficient use of airport facilities, and that the change from a weight-based charge to a passenger-based charge actually removed the incentive for airlines to maximise their passenger/MTOW ratio, rather than removing any disincentive previously existing under the MTOW-based charge to use larger aircraft.¹⁴³

It was also put to the Tribunal that the change from an MTOW to a passenger-based charging structure converted a fixed cost to a variable cost, and that one of the consequences of this was that airlines would be less likely to chase marginal customers.¹⁴⁴ The Tribunal accepted this argument, noting:

The second consequence of the change in the fixed to variable cost ratio identified by Dr Williams is that airlines are less likely to chase incremental or marginal customers and less likely to be concerned about losing marginal customers to their rivals. If a competitor were successfully to attract passengers away from another airline, the higher the costs that the airline will save by losing those marginal passengers to its competitor, the less its incentive to respond to the competitor's activities. Dr Williams explained this as a "softening" of competition. We accept that this is a likely consequence.¹⁴⁵

The Sydney airport case has highlighted that market power may also be used in the structuring of aeronautical charges.

The PC (at p. 18 of its issues paper) asks

What effect has the price notification requirement for services provided to regional airlines at Sydney Airport had on the overall structure of charges at the airport? How does the slot management system at the airport, including the provision of a separate pool of landing slots for regional airlines, influence the charging regime?

¹⁴¹ Virgin Blue Airlines Pty Limited [2005] ACompT 5, para. 245.

¹⁴² Larger aircraft tend to reduce the cost per passenger to the airline but increase the cost to the passenger of lower frequency of flights.

¹⁴³ Virgin Blue Airlines Pty Limited [2005] ACompT 5, para. 253-254.

¹⁴⁴ Below full load factor, the marginal cost to the airline (via the airport charge) of carrying a passenger increases for very low to the passenger charge.

¹⁴⁵ Virgin Blue Airlines Pty Limited [2005] ACompT 5, para. 525.

Declaration 90 pursuant to subs. 95X(2) of the Trade Practices Act declares the provision of aeronautical services to regional air services by Sydney Airports Corporation Ltd to be notified services. This means that Sydney airport must notify the ACCC if it intends to increase the price of such services. The declaration has effect from 1 July 2002 until 1 July 2007.

Direction 28 applies to an exercise of powers and performance of functions by the ACCC in relation to declaration 90. Under this direction, the average revenue-weighted percentage increase in prices paid by operators of regional air services to Sydney airport in each financial year for the provision of the declared services should not exceed the percentage increase in the CPI recorded in the year to the March quarter immediately preceding the start of the relevant financial year.

In contrast to the price cap arrangements that applied to the other price-monitored airports prior to the current arrangements, there is no provision for the pass-through of the costs of necessary new investment, government-mandated security requirements, or congestion charges employed as part of a demand management scheme under the Airports Act. These arrangements were put in place by the Government to ensure that regional airlines would continue to operate at Sydney airport after its privatisation.¹⁴⁶ The ACCC has not received any price notifications from Sydney airport under this declaration to date.

In terms of the overall structure of charges at Sydney airport, the inability of Sydney airport to recover from regional airlines any of the costs associated with government-mandated security or necessary new investment may result in higher charges to other users.

Runway movements at Sydney airport are also regulated under separate instruments. Runway movements are limited to 80 per hour and airport capacity is allocated administratively by Airport Coordination Australia. As part of these arrangements, New South Wales regional air services are guaranteed a certain amount of airport use capacity during peak periods.

These arrangements mean that a proportion of peak capacity at Sydney airport is guaranteed to regional airlines at price-capped rates and Sydney airport is unable to recover from regional users the costs of additional government-mandated security requirements or other necessary investment.

The PC examined the issue of pricing of scarce slot capacity in its last inquiry. It considered that

... although a slot management scheme can ration demand among 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, ..., while market clearing is attained with quantity rationing, some economic inefficiency is likely to result. Generally, price rationing of scarce slots is likely to promote more efficient use of limited capacity as well as signal more explicitly and efficiently the opportunity cost of using a capacity-constrained airport, the viability of building a new

¹⁴⁶ John Anderson MP, Minister for Transport and Regional Services, *Sydney Airport: The Next Ten Years*, Sydney basin airports national briefing forum, Speech AS08/2001, viewed 2 July 2006, <http://www.ministers.dotars.gov.au/ja/speeches/2001/as08_2001.htm>

airport and the need for new investment at the facility. In these circumstances, a price yielding above-normal profits (for a limited period) would be appropriate.¹⁴⁷

The ACCC considers that the existing approach to the allocation of landing slots could be improved to enable Sydney airport to improve pricing including application of price discrimination in a way that promotes efficient airport usage.

However, the scope for improvement only exists where Sydney airport is capacity constrained. Where this is the case (which may be in the medium term) appropriately set peak prices would ensure that airlines with the highest willingness to pay would obtain the available landing slots.

However, in the context of the ring-fencing arrangements for regional landing slots, there would be two sets of peak charges; one for the ring fenced regional slots (if possible under the regional price cap), and another for domestic and international RPT services. Where the willingness to pay of regional customers is lower than that for domestic and international RPT services, the ability of Sydney airport to effectively price discriminate (i.e. levy higher charges for customers that have a higher willingness to pay) is constrained.

The impact of the lack of pass-through provisions for congestion charges for regional services at Sydney airport depends on the extent to which Sydney airport is capacity constrained. In view of the general view in the recent Tribunal case, it would appear that this is not a significant issue in the short term. However, a pass-through provision for congestion charges may become necessary in the event that Sydney airport becomes capacity constrained in the future if charges for regional services are still price-capped. Further, the lack of pass-through provisions for regional services may limit the ability of Sydney airport to efficiently price discriminate if regional slots were capacity constrained.

3.2.2 Review principles d) and e) — quality of service outcomes and commercial negotiation

The Government's review principles relating to quality of service outcomes and commercial negotiation are:

- d. Quality of service outcomes should be consistent with users' reasonable expectations, and consultation mechanisms should be established with stakeholders to facilitate the two way provision of information on airport operations and requirements.
- e. It is expected that airlines and airports will primarily operate under commercial agreements and in a commercial manner, and that airport operators and users will negotiate arrangements for access to airport services.

These principles relate to quality of service and commercial negotiation and are covered to only a limited extent by the ACCC's existing quality of service monitoring. The results of the ACCC's quality of service monitoring are summarised in section 3.1 of this submission and indicate that the price-monitored airports' quality of service has been fairly stable over time and generally at acceptable or higher levels.

¹⁴⁷ Productivity Commission, 2002, op. cit., pp. 91-2.

However, the existing quality of service monitoring regime does not explicitly address whether the level of quality provided is at the level demanded by users, given the level of charges. Different users may demand differing levels of service and ‘more’ is not necessarily ‘better’. This price/quality trade-off is not revealed by the current information collected by the ACCC. It may be possible to devise additional airline survey questions to capture this issue.

In the Sydney airport case, the Tribunal considered that the existence of the ACCC’s quality of service monitoring regime ‘is no substitute for an explicit statement of service levels in a commercially negotiated agreement between the parties.’¹⁴⁸

The ACCC does not receive information in relation to the consultation mechanisms that currently exist between the airports and their airline customers. The parties are better placed to provide information to the PC on this issue.

However, it is apparent that current commercial mechanisms do differ between the different airports, with some airports successfully concluding agreements with airlines, while there is continuing disagreement at other airports. At some airports, while negotiations have taken place, the airlines have not been willing to commit to contracts. At Sydney airport, the dispute between it and Virgin Blue Airlines Pty Limited and Qantas has been revealed in the airlines’ action to have the services at Sydney airport declared under the provisions of Part IIIA of the Trade Practices Act.

In the Tribunal case, the Tribunal found that

[future revenue issues] are likely to be resolved by SACL exercising monopoly power to impose upon the airlines a level of revenue growth which would not be open to it in a competitive environment. While these issues are outstanding, and where the airlines have no recourse to independent arbitration and determination, there remains the opportunity for SACL to impose higher and additional charges upon the airlines which would be unlikely to be accepted in a more competitive environment.¹⁴⁹

In our view, the threat of unilateral increases to charges in circumstances where there are no alternative service providers, is significant for current airlines and potential new entrants who wish to fly into and out of Sydney Airport. Once they have committed to Sydney routes they have few options—pay the unilaterally increased charge, or withdraw from routes to and from Sydney.¹⁵⁰

We are satisfied that any commercial negotiations in the future between SACL and airlines using Sydney Airport as to the non-price terms and conditions on which the airlines utilise the facilities and related services at Sydney Airport are likely, as in the past, to continue to be protracted, inefficient, and ultimately resolved by SACL using its monopoly power to produce outcomes that would be unlikely to arise in a more competitive environment. This situation is exacerbated by the lack of an appropriate dispute resolution procedure providing independent arbitration in any of the commercial agreements entered into or proposed between SACL and the airlines.

¹⁴⁸ Virgin Blue Airlines Pty Limited [2005] ACompT 5, para. 441.

¹⁴⁹ Australian Competition Tribunal, Virgin Blue Airlines Pty Limited [2005] ACompT 5, Summary, pp. 4-5.

¹⁵⁰ Australian Competition Tribunal, Virgin Blue Airlines Pty Limited [2005] ACompT 5, para. 407.

We are satisfied that the ability of SACL to exercise monopoly power in relation to the airlines' use of the Airside Service is not subject to any effective constraints. We do not consider that the airlines have any significant countervailing power ...¹⁵¹

As discussed in section 2.1.3 of this submission, it appears that, where airports possess a significant level of market power, the existing monitoring arrangements do not operate to constrain this market power in order to facilitate 'balanced' negotiation of commercial agreements. The extent to which Part IIIA of the Trade Practices Act operates as a constraint on the airports' exercise of their market power is considered in Part 4 of this submission.

3.2.4 Summary of performance of existing light-handed regulation monitoring regime against the Government's review principles

This section of the ACCC's submission has highlighted the limitations of the existing price and quality of service monitoring regime for the purpose of assessing whether the airport operators have been abusing their market power. Moreover, the ACCC does not consider that any meaningful conclusions can be made on the question of whether the level of the airports' prices have not been significantly above efficient levels, using the airports' regulatory accounts for the three-year period of price monitoring.

Price and quality of service monitoring is able to show trends over time in some pertinent indicators. The ACCC's monitoring of airports has shown that there were substantial increases in airport charges, asset valuations, and short-term indicators of profitability following the removal of price regulation and the introduction of the current arrangements. The monitoring indicates that there have been no significant trends in quality of service outcomes over the same period.

The Government's review principles generally correspond to principles of economic efficiency. The information contained in the airports' regulatory accounts is not sufficient for the ACCC to answer the question as to whether the airports have earned excessive returns over the period of price monitoring. While the trends in prices and accounting profits may suggest that this may be the case, more information is needed in order to make such an assessment.

In particular, information on the efficient long-run costs of providing aeronautical services is required. Without this information, any 'excess' returns (as a measure of 'revenues significantly above long-run costs') may be attributable to improved technical efficiency and lower costs rather than (or in addition to) monopoly rents from abuse of market power. In this regard, any finding of 'excess' returns taken incorrectly to reflect an abuse of market power would result in a lack of incentives for airport operators to pursue productivity improvements. There is a risk here that assessing excess returns could, in effect, result in a 'shadow' form of rate of return regulation.

An important component of deriving the efficient long-run costs is an appropriate value for the cost (or 'value') of aeronautical assets, including land. This requires a

¹⁵¹ Australian Competition Tribunal, *Virgin Blue Airlines Pty Limited* [2005] ACompT 5, Summary, pp. 4-5.

review of the airport operators' asset valuations from an economic standpoint, since, invariably the valuations are prepared in accordance with accounting standards. The second major issue in assessment of airports' pricing and its impact on 'reasonable' returns is that monitoring periods are short relative to the long period of the airport leases and, in addition for the present review, there is only a short history for the existing monitoring regime. As a result, any calculation of indicators of 'excess' returns over the period since privatisation is inadequate and potentially misleading.

In addition to these major limitations, there are a number of second order issues, such as the problems inherent in making allocations between aeronautical and non-aeronautical services, which further complicates the identification and assessment of excess returns from aeronautical services alone.

In terms of the efficiency of pricing structures, the ACCC does not have information on the charges that are commercially negotiated between the airlines and the price-monitored airports. However, an examination of changes to list price structures reveals a move towards bundling of aeronautical charges for international services and a move towards passenger-based charges. The Sydney airport case has highlighted that market power may also be used in the structuring of aeronautical charges.

In terms of quality of service, while the ACCC's monitoring can track trends over time, it does not extend to whether the levels of service quality provided are consistent with users' reasonable expectations or in line with their willingness to pay relative to costs. Finally, while the ACCC monitoring does not cover information pertinent to an assessment of whether the parties are operating under commercial agreements negotiated in a 'balanced' manner, some light has been shed on this in the Tribunal case of Sydney airport. It is apparent that, where airports possess a significant level of market power, the existing monitoring arrangements do not operate to constrain this market power in order to facilitate 'balanced' negotiation of commercial agreements.

4. Future arrangements

4.1 Introduction

Section 2.1 of this submission discussed the levels of market power held by the price-monitored airports, concluding that these airports possess moderate to high levels of market power. The high levels of market power are brought about by significant barriers to entry in the supply of airport services associated with the natural monopoly characteristics of airports, combined with the strength of demand and limited substitution of supply possibilities. The ACCC considers that little change has occurred in the markets for airport services since the last PC inquiry to affect the PC's conclusions about the levels of market power held by the price-monitored airports.

While the PC in its 2002 report considered that there were a number of factors which would operate to constrain the exercise of the airports' market power, the ACCC does not consider that there are effective constraints, apart from the application of Part IIIA of the Trade Practices Act, which is considered later in this section of the submission.

The ACCC does not consider that the ability of airports to derive non-aeronautical revenues operates as a sufficient constraint on its monopoly power in relation to aeronautical services. Similarly, effective countervailing power held by airlines is limited to those cases where airlines have a viable alternative to the use of a particular airport for its air services. In Australia, this is quite limited. Finally, the existing monitoring regime is not effective in providing a significant constraint on aeronautical charges at the price-monitored airports.

The ability of the airports to use their high levels of market power is more likely than not to result in prices for aeronautical services above efficient levels (and possibly capacity and/or quality which are below optimum levels). The analysis in section 2.1 of this submission contends that the elasticity of demand for airport services (and consequently, the market power of airports) has not changed since the PC's last inquiry into price regulation of airport services, and is generally low. This is likely to result in significant distributional effects, as well as allocative efficiency consequences.

4.2 Alternatives to the current arrangements

The PC's terms of reference call for the identification of 'relevant alternatives to the current arrangements'. In order to advance viable alternative regulatory arrangements for airports, three main issues need to be considered:

- the natural monopoly market structure of airports
- the Government's objectives
- the experience with, and limitations of, the existing airports-specific monitoring arrangements (discussed in section 3 above).

Bearing in mind these issues, there appear to be two broad options:

- option A—rely on Part IIIA of the Trade Practices Act, while either removing the existing airports-specific monitoring arrangements or retaining them as a complement to Part IIIA
- option B—attempt to improve the existing airports-specific monitoring arrangements, in order to address the identified deficiencies and enable them to act as a direct constraint on the use of airport market power.

These two broad options are discussed below, in the context of the Government’s objectives. It is unlikely that either option will be a ‘perfect’ solution; however, the ACCC has attempted in the following discussion to identify the implications, cost and benefits of each option, in order to assist the PC in making recommendations to the Government about alternative future regulatory regimes.

4.2.1 The Government’s objectives in privatising airports and moving to a ‘lighter-handed’ regulatory regime

The PC’s terms of reference require it to identify relevant alternatives to the current arrangements ‘and the extent to which these alternatives would better achieve the Government’s objectives in privatising the airports and moving to a light-handed pricing regulatory regime’. In order to comment on regulatory alternatives, these objectives require some elaboration.

The stated rationale for the privatisation of the major Australian airports was to improve the efficiency of airport investment and operations in the interests of users and the general community, and to facilitate innovative management.¹⁵²

Privatisation of airports was supported by a light-handed regulatory regime which aimed to:

- promote the economically efficient operation of airports
- minimise compliance costs on airport operators and the Government
- facilitate commercially negotiated outcomes, benchmarking, and competition in the provision of services within airports.¹⁵³

Arrangements for the privatisation of airports and the pricing oversight function were implemented through the Airports Act, *Federal Airports Corporation Act 1986* and the Trade Practices Act, the objectives of which include:

- balancing the public interest and private commercial objectives

¹⁵² Turbulent Times: Australian Airline Issues 2003, Research Paper No. 10, Department of the Parliamentary Library, Australia, May 2003, p.29 [www.aph.gov.au/LIBRARY/Pubs/RP/2002-03/03RP10.htm].

¹⁵³ Treasurer, Terms of Reference ‘Price Regulation of Airport Services’, 6 April 2006 [see <http://www.ccnc.gov.au/inquiry/airport-services/tor.html>]

- development and operation of airports in as an efficient and commercial a manner as possible
- facilitating the comparison of airport performance in a transparent manner
- protection of users from abuse of market power by airport operators
- encouraging direct negotiation over prices between airports and users, rather than involving the Government.¹⁵⁴

The two broad options identified above are discussed in the following section, in the context of the set of pertinent government objectives.

4.3 Option A: Reliance on Part IIIA

Given the identified limitations of the current airports-specific monitoring arrangements, one option is to accept these limitations, either by removing the existing reporting and monitoring requirements, or retaining them but recognising what is practically achievable with monitoring. Primary reliance to constrain the exercise of airport market power would be placed on the general provisions contained in Part IIIA of the Trade Practices Act, which apply across the Australian economy. This option in effect poses the question: Is there a continuing need for an *airports-specific* regulatory arrangement?

In its issues paper (at p. 22), the PC asks

To what extent do the costs, lengthy time frames and other procedural aspects of the national access regime detract from its usefulness in (further) constraining the exercise of market power by the major airports? Are the changes to the regime that have been announced by the Government likely to increase its potential role? Are there other generic changes that could be made to Part IIIA to improve its usefulness in an airports context?

As outlined in section 2.7 of this submission, Part IIIA provides a third party access regime for those facilities that are of (essential) national significance and which exhibit natural monopoly characteristics and hence cannot be duplicated economically. It applies generally across the Australian economy.

4.3.1 Experience with Part IIIA in airports

Currently, the domestic airside service at Sydney airport is declared under the provisions of Part IIIA, leaving open the option for a party to seek to have the ACCC arbitrate a dispute over the terms and conditions of access to this service. The Sydney airport case illustrates the lengthy time frames that can be associated with seeking declaration under Part IIIA since Virgin Blue first applied to the NCC for declaration on 1 October 2002. Three years and ten months later, the issue is on appeal to the Federal Court and has not yet been finally determined. The arbitration process also has the potential to be lengthy, with associated high costs, due to the number of avenues for appeal in the provisions. In particular, a determination by the ACCC may be appealed to the Tribunal. Plainly, such long delays are costly to all parties.

¹⁵⁴ Pricing Policy Paper, Department of Transport and Regional Development, November 1996.

4.3.2 Improving the processes under Part IIIA

The current proposed amendments to Part IIIA, outlined in section 2.7 of this submission, introduce time frames for decision making which may reduce the overall time taken for declaration and arbitration decisions. However, the ability of dissatisfied parties to seek a ‘re-hearing’ of a dispute by the Tribunal is not proposed to be removed. The ACCC questions whether this ‘re-hearing’ avenue is necessary and whether it may unnecessarily delay resolution of disputes.¹⁵⁵

Apart from the issue of cost and delay, the ACCC’s submission to the previous PC inquiry highlighted some other shortcomings of reliance on a negotiate-arbitrate model, such as is encompassed in the existing Part IIIA arrangements. In summary,

- the limited and private nature of arbitrations may result in uncertainty over pricing outcomes
- there may be a propensity for parties to seek arbitration rather than negotiate outcomes.¹⁵⁶

In respect of the first point, the proposed amendments to Part IIIA currently before the Parliament provide for all decisions to be published and that the ACCC publish a report on the final determination it makes on a declared service (proposed s. 44ZNB).

In respect of the propensity of parties to seek arbitration, the Tribunal in the Sydney airport case made the following comments:

Declaration of the Airside Service does not ... inexorably lead to arbitration; there is still scope for commercial resolution of access issues between the parties. Rather declaration enables commercial negotiations to continue, but provides an opportunity for independent arbitration of the terms and conditions of access to the Airside Service should those commercial negotiations prove unsuccessful.¹⁵⁷

The use of arbitration under Div 3 of Part IIIA is only activated where the parties are unable to reach agreement on one or more aspects of access to a service. Arbitration is not immediate and indeed may never occur.¹⁵⁸

... declaration need not result in arbitration. The parties are free to reach commercial agreements and will have a clear commercial and financial incentive to do so.¹⁵⁹

... declaration will redress the bargaining power asymmetry presently existing due to SACL’s position as a monopoly provider of the Airside Service in Sydney in circumstances

¹⁵⁵ Section 152DOA of the Trade Practices Act, which was inserted by the *Trade Practices Amendment (Telecommunications) Act 2001*, removed merits review under the telecommunications access regime, in recognition that it undermined the efficacy of the regime.

¹⁵⁶ Australian Competition and Consumer Commission, May 2001, op. cit., pp. 93-95.

¹⁵⁷ *ibid*, p. 6.

¹⁵⁸ Australian Competition Tribunal, *Virgin Blue Airlines Pty Limited* [2005] ACompT 5, para. 592.

¹⁵⁹ *ibid*, para. 594.

where the scope of dispute resolution procedures in relation to access to the Airside Service are severely limited.¹⁶⁰

The ACCC agrees that declaration of an aeronautical service provided by an airport gives airlines a greater degree of bargaining power in negotiating terms and conditions of access with the airport. It would be expected that an airport would be more willing to engage in constructive negotiations with airlines once a service is declared. However, the ACCC's experience in conducting arbitrations under the telecommunications provisions and in administering the NNI airports provisions suggests that this may not necessarily be the case. In particular, an access provider's incentives to negotiate may not be compelling until the arbitration has progressed beyond its preliminary stages.¹⁶¹

Where services at particular airports (other than Sydney airport) have not been declared, it may be the case that the prospect of declaration might still constrain the higher bargaining power of airports and perhaps provide some 'balance' in commercial negotiation. However, given the considerable costs, time and uncertainty associated with seeking declaration of a service under Part IIIA, it is likely that these factors may limit the extent to which the mere existence of the provisions actually constrains the market power of the airports.

Notwithstanding the limitations outlined above, the Part IIIA provisions do provide an avenue for the ACCC, as independent regulator, to determine terms and conditions of access for declared airport services, in accordance with principles specified in the legislation. However, it should be noted that decisions both in relation to declaration of services and in relation to arbitration determinations over the terms and conditions of access do require specific industry information about the airport's activities.

While the limitations of the information obtained from the airports' regulatory accounts for the purposes of addressing the Government's review principles have been highlighted in section 3 of this submission, historical information on the prices, costs, revenues, activity levels and quality of service may be useful inputs to decisions on whether to declare a particular service and in relation to the terms and conditions of access to that service. Therefore, it may be desirable, in addition to relying on the Part IIIA provisions, to also continue the requirements on the price-monitored airports to either publish or provide to the ACCC, regulatory accounts and quality of service indicators in accordance with Parts 7 and 8 of the Airports Act. The provision of such information may also be seen as a reasonable obligation to place on airports given their status as natural monopolies without formal regulation.

In addition, the transparency of airports' financial accounts provided by the price-monitoring arrangements may assist airlines in their negotiations with airports by addressing to some degree the information asymmetry inherent in such negotiations. The ACCC understands that such information is considered helpful to

¹⁶⁰ *ibid*, para. 602.

¹⁶¹ See Trade Practices Amendment (Telecommunications) Bill 2001 (Bills Digest No. 39 2001–02, which introduced amendments to Part XIC of the Trade Practices Act (the telecommunications access provisions) 'to encourage parties to settle access conditions by negotiation rather than arbitration and to reduce delays in the arbitration process' and ACCC, 2001, *op. cit.*, pp. 93-94.

airlines and suggests that there be a continuing requirement either on airports to publish such information, or to provide information to the ACCC, for this purpose.

Under such arrangements, there would be no expectation that price and quality of service monitoring by the ACCC would be capable of identifying abuse of market power. Rather such monitoring would be limited to highlighting any apparent trends in the data, as well as providing transparency of accounts for the purposes of assisting airlines in their negotiations with airports, as well as providing a source of information for any decisions made under Part IIIA. As an alternative, the requirements on airports could be changed to require them to publish audited information, rather than provide it to the ACCC for analysis and publication.

In terms of consistency with the Government's objectives, the option of Part IIIA has the potential to limit abuses of monopoly power and encourage efficient operations and levels of investment, subject to the limitations of sole reliance on a negotiate-arbitrate model. These same limitations will also affect the extent to which the provisions can facilitate commercially-negotiated agreements. The level of compliance costs associated with this option will depend on the extent to which commercial negotiations are facilitated by the existence of the Part IIIA provisions and, hence, the extent to which arbitrations occur. Finally, the extent to which the performance of airport operators can be compared may depend on whether the ACCC continues to administer price and quality of service monitoring, or whether airport operators are simply required to publish information required to be provided currently under the Airports Act. However, minimum consistency/uniformity requirements could be strengthened.

4.4 Option B: The existing airports monitoring regime—can and should it be ‘improved’?

4.4.1 Introduction

Given the limitations identified with the current monitoring arrangements, the second broad option is to consider improvements that address the limitations. Although limited, there is experience with monitoring regimes in other Australian jurisdictions and overseas that may be drawn upon. This is discussed below.

All forms of monitoring, and more generally, ‘light-handed’ regulation, attempt to constrain the behaviour of operators through the use of a threat that more restrictive, that is, ‘heavier handed’ regulatory measures can be introduced if market power is abused. The credibility of such a threat is the critical factor in determining whether ‘light-handed’ regulation can be effective in limiting abuse (see section 2.4 above). In brief, attempts to make monitoring more effective essentially involve attempting to make the threat of ‘heavier’ regulation more credible. However, there is a danger here: strengthening the credibility of the threat typically imposes an increase in the attendant information to ‘trigger’ it (using thresholds and pricing ‘guidelines’, for example), and this has a strong tendency to lead down a path towards requirements that mirror heavy-handed regulation. Thus, such attempts have a high risk of becoming intrusive (in terms of information demands) and high in compliance costs. In effect, efforts for improvements along this path are drawn towards what might be described as ‘shadow heavy-handed regulation’. Moreover, where the design of such regimes deliberately limits the degree of information, specific thresholds and guidance

(to resist being ‘too heavy handed’), they are likely to result in significant uncertainty, with consequent negative effects on the incentive to invest.

In essence, monitoring regimes which attempt to incorporate a credible regulatory threat invariably need to resort to some ‘shadow’ form of regulation to provide a ‘trigger’ for that threat. It follows therefore that they will most likely induce similar flaws or distortions that are associated with the direct forms of that regulation—that were the motivation for discarding them in the first place. Thus, if rate of return is the key target of monitoring information and is used as part of a threshold or trigger, then part of the conduct likely to result is investment distortions/higher capital inputs as a result of weak incentives for cost efficiency. Attempts to build in threats based on benchmarks of cost efficiency further compound the information requirements and the complexity and cost of the regime.

It is difficult to escape the conclusion that ‘light-handed’ regulation, of which monitoring is the prime example, is either ‘too light’ to be effective for the task, or ‘too heavy’ to be justified.

Against this background, the rest of this section gives an overview of the general model of monitoring used currently for Australian airports and then outlines and comments on two alternative extended forms of monitoring; namely, the use of pricing principles and thresholds.

4.4.2 Existing monitoring arrangements

Overview

The general type of monitoring, such as is used currently for Australian airports, involves the collection of audited financial and quality information from operators, with collation, limited analysis, and dissemination of the information by the regulator, on an annual basis. The regulator is provided with no formal powers to control price levels.

Information required under such arrangements may include:

- prices, operating expenditure and revenue of both monopoly and competitive business segments
- capital expenditure
- operational statistics
- quality of service indicators
- standard terms and conditions of service supply.

Industry experience

Both Australia (current airports regime) and New Zealand (previous electricity regime) have applied regimes of this type.

Australian airports (current regime)

The current airports regime is described in section 2.5 of this submission. Together with this monitoring regime, the Government's review principles provided some broad indication of the approach that would be taken in reviewing airports' conduct in the current review.

As discussed in section 3 of this submission, while the ACCC's monitoring revealed substantial upward trends in prices and reported operating margins following the removal of price regulation, the information collected under monitoring is of limited use in assessing whether airports have abused their market power. Specifically, the current monitoring regime does not allow inefficient pricing or excess rate of return to be definitively identified. However, the monopoly market structure, the limitations of light-handed monitoring, and the trends in charges and operating margins, in combination, suggest that the current monitoring regime does not appear to be effectively constraining the exercise of market power by the price-monitored airports.

New Zealand electricity market (previous regime)

During the period 1994–2001, there was minimal price regulation applied in the New Zealand electricity market. The regime relied principally on information disclosure, with general provisions of the Commerce Act to deal with anti-competitive behaviour.

Information collected under the regime prior to 1998 included separate audited financial statements for activities exhibiting natural monopoly characteristics, methodologies for cost and asset allocations, information on individual charges, costs and revenue by consumer tariff category and cost transfers between activities, and performance reports containing financial, energy efficiency and reliability measures. From 1998 the information requirements were tightened to better promote the objectives of the regime.

These information disclosure requirements were found to be insufficient to allow for any meaningful analysis of company performance.¹⁶² In addition, restrictive regulations as to when price controls could be implemented under the Commerce Act meant that there was no credible regulatory threat. Price-cost margins were found to have widened substantially over the period of the information disclosure regime.¹⁶³

Consistency with Government objectives

This general type of monitoring regime does not appear to be effective in serving several of the Government's objectives, especially efficient pricing (stemming from effective constraint of monopoly power) and effective commercial negotiation.

Where there is no power to directly control the level of prices or quality within the industry, the achievement of efficient outcome objectives places full reliance on the credibility of the regulatory threat (and as discussed above, the informed ability to

¹⁶² New Zealand Ministry of Economic Development 2000, *Ministerial Inquiry into the Electricity Industry June 2000 – Report to the Minister of Energy*, 13 June 2000.

¹⁶³ Bertram, G., and Twaddle, D. 2005. "Price-Cost Margins and Profit Rates in New Zealand Electricity Distribution Networks Since 1994: the Cost of Light Handed Regulation" *Journal of Regulatory Economics* 27:3 281-307.

correctly ‘trigger’ that threat). Despite having broad pricing principles in place to provide guidance to both operators within the industry and the regulator, the regime is unlikely to be as effective in constraining monopoly power as would be the case if there were clearly articulated processes or criteria against which performance could be, and would be required to be, assessed.

In addition, restrictions on the information that the regulator can access (which also include issues of definitional clarity and consistency), particularly regarding a complete view of airport financial information, severely hampers the effectiveness of the regime. Essentially, where the information provided to the regulator is insufficient to unambiguously determine whether monopoly pricing is occurring, the threat of re-regulation in the future, which hinges on an assessment of abuse of power, is rendered ineffective and hence not credible. The lack of any powers of intervention (outside application of Part IIIA) also provides operators with the ability to maintain prices above efficient levels for longer periods of time.

Moreover, with respect to technical efficiency, under this regime firms have only a limited direct profit incentive to drive down costs to efficient levels, particularly where cost efficiency is not separately reflected apart from ‘profits’ within the monitoring regime. Further, if behaviour is judged solely on the basis of computed levels of profitability, this type of ‘shadow regulation’ will closely resemble rate of return type of regulation. Pressure on the operator to create technical efficiency gains also needs to come from the market for airport services and will depend on the extent to which airport users possess countervailing power and the information collected can highlight unsatisfactory performance.

Incentives to invest under this regime may be adversely affected to the extent that investors perceive that the institutional/regulatory arrangements (in particular, the risk of a change in regulation—beyond their ‘control’) are more uncertain than anticipated at the time of purchase of the lease. This is in contrast to a system of direct price regulation, such as a price cap, where (over at least the regulatory period) future revenues and costs are driven by the market and change in the regulatory regime is unlikely.

With regard to the object of facilitating commercially negotiated agreements, this depends primarily on the respective levels of bargaining power held by the firms and their users. The influence of the nature of the monitoring arrangements is secondary, although it is supportive through redressing to some degree the asymmetry in information between the parties.

The compliance costs associated with such a regime will include the costs of the firms in compiling the required information, as well as the costs of the regulator in compiling and analysing the information. In addition, periodic reviews or inquiries such as the current PC airports inquiry impose costs on all interested parties in making submissions, as well as the costs of the reviewing body in carrying out the inquiries.

From the ACCC’s perspective, the costs it faces in administering a monitoring regime of this kind would exceed the costs of administering a price cap regime. In terms of ongoing costs, administering a price cap regime involves a relatively straightforward assessment of actual charges with the price cap (see the analysis contained in the

ACCC's regulatory reports for the previously price-capped airports).¹⁶⁴ This is likely to consume the resources of an analyst for about three to four months, as well as supervisory resources. In contrast, the current airports monitoring regime (including price and quality of service monitoring) consumes the resources of two analysts for a total period of about six to eight months, as well as supervisory resources.

Whether a regime of this type facilitates better comparison of performance between operators will depend on the indicators being used as a basis for comparison and on the comparability of the different businesses. The earlier discussion in section 3 of this submission highlighted the subjectivity inherent in a number of aspects of the airports' regulatory accounts (for example, allocations between aeronautical and non-aeronautical services, asset valuations), as well as the problems involved in examining only a short time period in comparison with the long lives of aeronautical assets. These issues make problematic any comparison of airports using measures of aeronautical prices or profits.

4.4.3 Monitoring with pricing principles

Overview

'Pricing principles' in this context refers to a set of qualitative guidelines which must be adhered to by an operator in establishing price and quality levels. Under this form of arrangement, regulatory approval may be required for any pricing methodology established by the operator, with the operator being free to set prices without regulatory intervention once approval of the methodology is obtained. Alternatively, an operator may be free to act without regulatory intervention until a complaint is made. In either case, an operator has the freedom to adjust prices in response to changing industry conditions without regulatory approval. This approach compares to those pricing principles currently in place for airports which act merely as a guide for reviewing the effectiveness of the regulatory regime.

This arrangement will generally be used in conjunction with information gathering and disclosure powers of the regulator as would apply under the 'existing monitoring arrangements' model discussed above. However, additional information would be required to undertake an assessment of whether the pricing principles had been complied with. Such information is necessary for an initial assessment of submissions from operators, to ensure continued compliance with regulatory objectives and to better inform market participants. Such information would include how:

- prices are calculated
- pricing principles are applied to price setting
- other relevant economic principles or commercial considerations have been included in developing prices.

¹⁶⁴ The assessment may be a bit more complicated, for example, where there have been major changes in price structures and charges, depending on the specification of the price cap.

Pricing principles can be broad, reflecting the overall objectives of the regulatory regime, or may be specific, setting upper and lower bounds for prices or describing acceptable approaches to the structure of prices.

This regime of qualitative pricing principles, in order to be effective, requires quantitative evidence to measure performance against the principles, the output of which is quantitative. That is, for example, if prices are required to be set at efficient levels, the regulator must establish what such price levels are, in order to assess the firm's actual prices. This calls for the exact type and range of information that is needed in regulatory price setting.

Similarly, where the regulator only examines adherence to the pricing principles when a complaint is made, the regime will need to specify what is required of such a complaint in order to justify an inquiry by the regulator. This runs into the same problems of requirements of quantitative evidence as discussed above.

Industry experience

Victorian ports

The Port of Melbourne Corporation (PoMC), which is regulated by the Essential Services Commission of Victoria (ESCV), has been subject to a 'pricing principle regulatory arrangement' in respect of channel and berth services since 1 July 2005. Prior to the current regulatory regime, the ESCV imposed price caps on average prices for prescribed services, with a price path specified by a CPI-X formula. In general, this regime was found to have worked well. However, in recognition that the Victorian ports sector is characterised as an imperfectly competitive market rather than a monopoly market,¹⁶⁵ the ESCV considered that light-handed regulation was a more proportionate regulatory response. Although it considered that there was no evidence that regulation had to date significantly reduced investment or service quality, it gave weight to submissions it had received that argued that investment in particular should be a core concern in developing future regulatory arrangements. PoMC argued that port and logistics competition is based on 'investment-driven quality' and that it had lost market share to non-regulated ports during the period of price controls, therefore arguing that 'Restricting prices to the extent that investment is inhibited damages competition.'¹⁶⁶

These pricing principles require prices to be set as near as possible to efficient long-run costs, prevent the use of market position to disadvantage a competitor, and restrict the ability of PoMC to price discriminate between equivalent users of a service.

Under this arrangement, PoMC must have regard to these pricing principles in developing a Pricing Policy Statement which addresses how it will:

- calculate tariffs
- apply the pricing principles

¹⁶⁵ ESCV, *Regulation of the Victorian Ports – Final Report*, 2004, pp. 6-7.

¹⁶⁶ *ibid.*, p. 47.

- apply other relevant economic principles or commercial considerations in developing its tariffs.

This statement must be submitted to the ESCV and will remain in force for the term of the Price Monitoring Determination (five years unless revoked earlier).

In addition, PoMC is required to publish Reference Tariff Schedules which set out the standard terms and conditions by which it will provide regulated port services. These schedules specify the charge for each prescribed service, a description of the services provided at each price and any applicable standards of service. Port users may take up access at the standard terms and conditions or seek to negotiate prices.

The ESCV can conduct an investigation in relation to the supply of prescribed services when required in the achievement of its objectives. If an investigation indicates that the current regime is not meeting the regulatory objectives, the ESCV can alter the method of regulation in place.

Supporting these requirements are financial information collection powers of the ESCV in respect of both prescribed and non-prescribed services. This attempts to ensure that the ESCV is as fully informed as possible in relation to the allocation of costs to prescribed services. An annual Ports Monitoring Report will also be published by the ESCV with information on prices, demand for services, service quality and productivity performance indicators. However, similar to the ACCC's airports monitoring regime, the ESCV will not assess port conduct in its monitoring reports, but rather will make such assessment in a future review.¹⁶⁷

Consistency with Government objectives

In comparison with the existing airports monitoring arrangements, monitoring with pricing principles potentially provides more information to the regulator which may assist it in detecting abuses of monopoly power. The extent to which this is the case depends upon the scope and quality of the information collected by the regulator. Where this information is insufficient to determine compliance with the pricing principles, high costs can be incurred in procuring the additional information required in assessing a potential breach. As discussed above, the type and range of information that is needed in order to assess compliance with qualitative pricing principles will tend to mirror that required in regulatory price setting.

If information asymmetries cannot be adequately overcome, the regulator may be unable to restrict abuses of market power to an extent greater than under the current arrangements.

Similar to the current arrangements, firms under this regime have no direct incentives to drive down costs to efficient levels, particularly where cost efficiency is not captured within the monitoring regime. Incentives to invest under this regime may similarly be adversely affected if investors perceive that the arrangements are too uncertain.

¹⁶⁷ *ibid.*, pp. 111, 118.

Whether such arrangements are capable of facilitating commercially negotiated agreements will depend on the respective levels of market power held by the firms and their users, more than by the precise nature of the monitoring arrangements.

The compliance costs associated with such a regime will exceed those associated with the current regime. Additional costs will be incurred by the regulated firms in compiling information to demonstrate that they are complying with the pricing principles, and extra costs will be incurred by the regulator in assessing compliance. Up front costs will be incurred in determining the pricing principles and information requirements.

Again, whether a regime of this type facilitates comparison of performance between operators will depend on the consistency of application of information requirements as well as the comparability of different businesses.

Overall, the regulatory outcomes of a pricing principle regime, both in respect of the cost of administering it and the efficiency improvements that result for the industry, will be largely dependent on the administrative processes underlying the regime. Compliance costs are likely to exceed those under the current regime and uncertainty and regulatory risk under this regime may also be higher than under the current regime. Where an operator is required to establish compliance with pricing principles on an annual basis, market outcomes and compliance costs are likely to be close to those achieved through more formal controls. Alternatively, where an operator is free to act independently until a complaint is made, compliance costs and market efficiency gains are likely to be significantly lower.

4.4.4 Monitoring with thresholds

Overview

A threshold monitoring regime involves the setting of quantitative threshold limits for prices and/or quality, along with a process for periodically assessing compliance with the thresholds by operators. As with a pricing principles approach, a threshold regime will usually be introduced in conjunction with information collection and disclosure powers of the regulator. A threshold approach explicitly recognises and embodies *quantitative* requirements. It tends to be better suited to contexts in which it may draw upon a historical legacy of understanding by the firms involved of the role of the threshold from earlier regulatory regimes.

Thresholds may relate to the level of prices, quality of service indicators such as length of delays, number of 'outages' etc.

Thresholds are usually set in the base year at efficient levels, with some form of adjustment mechanism (such as CPI - X) used to update the levels annually over a set determination period. Breach of a threshold will trigger a more detailed investigation by the regulator to determine whether a more heavy-handed approach (direct price control) is required.

In addition to the information requirements of a price monitoring regime, the implementation of a threshold monitoring regime is likely to need additional information, such as:

- consistent, firm specific price, profitability and productivity indicators
- expected quality of service indicators
- threshold compliance statements
- regulatory asset values
- forecast efficient operating costs and investment
- expected demand volumes.

Industry experience

New Zealand electricity market (current regime)

The current regulatory regime for the New Zealand electricity market, consisting of price and quality thresholds supported by information disclosure requirements, has been in place since August 2001 (although the first price thresholds were not set until June 2003).

Price thresholds, set on a five-year basis and assessed annually, require that notional revenue (being revenue from regulated activities less any pass-through costs) at the assessment date does not exceed the allowable notional revenue as determined under a CPI-X price path, and that notional revenue at any time during the assessment period has not exceeded the greater of the notional revenue at the assessment date and notional revenue at the reference date of the initial threshold notice. The X factor in the CPI-X price path for distribution businesses is set through a comparative approach, factoring in expected industry-wide efficiency gains and the relative performance of groups of distribution businesses. Quality thresholds look at factors such as planned and unplanned interruptions, consultation with, and provision of advice to customers.

In the event that a threshold is breached, the NZCC is required to launch an investigation. A decision can then be made to:

- clear the company of any wrongdoing
- implement an administrative settlement, with the business agreeing to undertake corrective action
- implement direct price controls in the form of price or profit caps.

Direct price controls can only be introduced when this is considered to be in the long-term interest of consumers.

Information disclosure requirements include an annual threshold compliance statement to be provided to the NZCC. This is produced in addition to information on profits, costs, asset values, prices, quality and reliability of supply that is designed to lead to a more informed, and therefore efficient, market.

Issues raised in respect of the operation of the regime include the substantial information requirements in conducting a post-breach investigation¹⁶⁸ and the lack of consistency in how the NZCC has applied the criteria for determining whether to implement direct price controls.¹⁶⁹

Consistency with Government objectives

A threshold monitoring regime is designed to provide clear parameters within which a company can operate free from regulatory intervention. Accordingly, there should be less scope for any abuse of monopoly power than with other forms of light-handed regulation. Despite this, the inability of a regulator to adjust prices retrospectively will mean that this regulatory arrangement is less effective at constraining monopoly behaviour than direct price control.

In comparison with the existing arrangements and the pricing principles model, threshold monitoring may provide incentives for firms to operate at efficient levels if this is effectively built into the design of the thresholds.

The effect on incentives to invest will depend on the clarity of the investigation process and the criteria for determining whether direct price controls will be implemented. This regime has the potential to be highly uncertain in its application, despite the intention for quantitative thresholds to provide certain benchmarks for behaviour.

Again, whether such arrangements are capable of facilitating commercially negotiated agreements will depend on the respective levels of market power held by the firms and their users, more than by the precise nature of the monitoring arrangements.

The compliance costs associated with such a regime are likely to exceed those associated both with the current regime and with a pricing principles regime. In order to establish thresholds which reflect efficient practice in the industry, a substantial review would be required. Annual monitoring to ensure compliance with the thresholds may exceed the regulator's compliance costs in undertaking the monitoring associated with the current airports monitoring regime. In the event of a breach of a threshold, the additional costs incurred will depend on the particular circumstances, but may approach the costs involved in a traditional price-determination exercise.

A threshold regime provides additional information for market participants in regard to the relative performance of different operators. If the thresholds are designed to cater for the specific needs of each operator, the extent to which different operators are comparable can also be assessed. Additionally, the threshold itself provides a measure against which to assess performance.

Overall, 'threshold' monitoring may achieve better outcomes in terms of efficiency than other less intrusive monitoring regimes. However, compared with direct price regulation, this type of monitoring is likely to be more costly and uncertain, as well as

¹⁶⁸ NZCC 2004, *Regulation of Electricity Line Businesses Targeted Control Regime Assessment and Inquiry Guidelines*, p. 24.

¹⁶⁹ Vector Limited 2005, *Submission on Intention to Declare Control of Unison*, p. 1.

being less effective in achieving efficient outcomes. Regulatory risk is substantial under a threshold regime, particularly where the regulator does not have sufficient information to accurately set thresholds near efficient levels. Information asymmetry could result in thresholds which provide operators with the ability to build monopoly rents into their prices (where thresholds are set too high), or that result in substantial costs being incurred in investigating breaches which do not significantly depart from optimal market conditions (where thresholds are set too low). In attempting to minimise the potential for such outcomes, the costs and information demands of the regulator are likely to be similar to that under direct price regulation.

4.4.5 Summary

Attempts have been made in other Australian jurisdictions and overseas to make ‘light-handed’ monitoring regimes more effective at constraining market power. Two examples have been discussed in this section—monitoring with pricing principles carried out by the ESCV in relation to PoMC and monitoring with thresholds carried out by the NZCC in the electricity industry. These two regulatory frameworks, as well as price monitoring in its basic form are considered in NERA’s report produced for the ESCV and referred to earlier in section 2.4 of this submission. In particular, in the case of airports where actual or potential competition is lacking, NERA’s report suggests that monitoring with pricing principles is ‘unlikely to be efficient’; whereas threshold monitoring ‘may prevent the misuse of market power’.¹⁷⁰

However, there is an unavoidable tension involved in attempting to make ‘light-handed’ monitoring regimes more effective at constraining market power, while at the same time maintaining the ‘light-handed’ nature of the regime and avoiding the detrimental effects on appropriate investment or possibly increased uncertainty.

The examples of monitoring with pricing principles and threshold monitoring both attempt to make monitoring more effective by strengthening the credibility of the threat of re-regulation. However, as alluded to above, this runs into a number of problems.

Firstly, where cost efficiency incentives are not part of the regime, which may be the case particularly for monitoring with pricing principles, such monitoring regimes risk resembling ‘shadow’ rate of return regulation, with the associated distortion of incentives for technical efficiency and appropriate investment.

Secondly, attempting to make the trigger and threat of re-regulation more credible inevitably brings with it greater compliance costs and ‘intrusiveness’, lessening the degree to which such a regime can be described as ‘light-handed’. Indeed the compliance costs of such regimes may well be greater than a well-designed direct regulatory regime.

Thirdly, while the intention of creating a more credible threat of re-regulation is designed to constrain the use of monopoly power, such monitoring regimes are unlikely to be able to achieve this as effectively as direct price regulation (but at a possibly higher compliance cost).

¹⁷⁰ NERA 2004, op. cit., pp. 55-56.

Finally, and most importantly, these regimes are likely to be highly uncertain and risk inhibiting investment. Uncertainty arises in the case of monitoring with pricing principles in terms of the practical application of principles and determination of what the consequences of non-compliance will be. Under threshold monitoring, uncertainty arises as to when thresholds are actually designated breached and as to what the likely consequences of the breach and the outcome of subsequent investigation will be.

4.5 Summary of potential future arrangements

Given the high degrees of market power held by the price-monitored airports and the limited constraint on the exercise of such market power imposed by the current airports monitoring regime, there appear to be two broad options for addressing the distributional and allocative efficiency consequences arising from the exercise of market power:

- option A—rely on Part IIIA of the Trade Practices Act, while either removing the existing airports-specific monitoring arrangements or retaining them as a complement to Part IIIA
- option B—attempt to improve the existing airports-specific monitoring arrangements, in order to address the identified deficiencies and enable them to act as a direct constraint on the use of airport market power.

Reliance on Part IIIA to address concerns about abuse of monopoly power is likely to be reasonably effective in constraining monopoly power, but its effectiveness may be limited by the cost and delay involved in seeking redress through the Part IIIA provisions. In the case of airports, this is heightened by the imbalance in bargaining power and, unless addressed, by the asymmetry in information between the parties. In addition, generic problems associated with negotiate-arbitrate models may also apply in the airports context. These are that there may be a propensity for parties to seek arbitration rather than negotiate outcomes; and the limited and private nature of arbitrations may result in uncertainty over pricing outcomes.

This option could involve either removing the current airports-specific monitoring arrangements, or retaining them but recognising the inherent limitations of monitoring. While the existing monitoring information is unlikely to provide all the information necessary for making decisions under Part IIIA, it is nevertheless likely to provide some useful information. Such information may also address to some extent the information asymmetries between airports and airlines, thereby assisting airlines in their negotiations with airports. Therefore, there may be a case for continuing some monitoring as a complement to Part IIIA. This translates to continuing to require airports to provide the price and quality of service information required under the Airports Act for these purposes.

Attempting to improve the existing monitoring arrangements would need to address the crucial weakness of lack of a clear credible threat of re-regulation if market power is abused. The two key steps in this process are identification of abuse of monopoly power and a mechanism to re-impose regulation in the event of demonstrable abuse. Unfortunately, the process is intrinsically problematic. Examples of expanded processes such as imposition of pricing principles with monitoring, or establishment of threshold monitoring appear inadequate and the (limited) experience with them

reinforces this. Both models impose greater compliance costs but are likely to be less effective in preventing abuses of monopoly power and costs due to regulatory uncertainty than under some forms of direct price regulation.

5. Conclusion

The ACCC considers that there have been no substantial changes to the conditions affecting the market power of the price-monitored airports since the findings of the last PC inquiry in 2002. These airports possess moderate to high market power in the provision of that bundle of services that is required by airport users if they are to use the airport at all.

The price-monitored airports are not effectively constrained in their ability to use this market power by their ability to derive non-aeronautical revenue or by any countervailing power held by airlines.

Neither does the existing system of price and quality of service monitoring constrain airports' market power. The ACCC is able to highlight trends over time in the indicators it monitors, which, for price monitoring, are based on accounting information supplied by the airports. However, it is not possible to make any judgements from the price monitoring information as to whether airports have complied with the Government's review principles, including whether their pricing incorporates monopoly profits.

The ability of the airports to use their high levels of market power is more likely than not to result in prices for aeronautical services above efficient levels (and possibly capacity and/or quality which are below optimum levels). Given the generally low elasticity of demand for airport services, this is likely to result in significant distributional effects, as well as allocative efficiency consequences.

To address these consequences in the context of the Government's objectives to have a 'light-handed' regulatory regime applied to airports, there appear to be two broad options:

- option A—rely on Part IIIA of the Trade Practices Act, while either removing the existing airports-specific monitoring arrangements or retaining them as a complement to Part IIIA
- option B—attempt to improve the existing airports-specific monitoring arrangements, in order to address the identified deficiencies and enable them to act as a direct constraint on the use of airport market power.

Reliance on Part IIIA to address concerns about abuse of monopoly power is likely to be reasonably effective in constraining monopoly power, but its effectiveness may be limited by the cost and delay involved in seeking redress through these provisions. In the case of airports, this is heightened by the imbalance in bargaining power and, unless addressed, by the asymmetry in information between the parties. In addition, generic problems associated with negotiate-arbitrate models may also apply in the airports context.

This option could involve either removing the current airports-specific monitoring arrangements, or retaining them but recognising the inherent limitations of monitoring. While the existing monitoring information is unlikely to provide all the

information necessary for making decisions under Part IIIA, it is nevertheless likely to provide some useful information. Such information may also assist address to some extent the information asymmetries between airports and airlines, thereby assisting airlines in their negotiations with airports. Therefore, there may be a case for continuing some monitoring as a complement to Part IIIA. This translates to continuing to require airports to provide the price and quality of service information required under the Airports Act for these purposes.

Attempting to improve the existing monitoring arrangements would need to address the crucial weakness of lack of a clear credible threat of re-regulation if market power is abused. The two key steps in this process are identification of abuse of monopoly power and a mechanism to re-impose regulation in the event of demonstrable abuse. Unfortunately, the process is intrinsically problematic. Examples of expanded processes such as imposition of pricing principles with monitoring, or establishment of threshold monitoring, appear inadequate and the (limited) experience with them reinforces this. Both models impose greater compliance costs but are likely to be less effective in preventing abuses of monopoly power and costs due to regulatory uncertainty than under some forms of direct price regulation.

Appendixes

1. Empirical identification of presence of market power in on-airport car parking

It may be possible to gauge empirically the degree of any monopoly power applied to car parking by airports. A possible approach is outlined here that may be adapted for both short and long-term parking. It draws upon a combination of observed charges and user surveys.

Denote the price of a car parking space on-airport as N \$ per hour¹⁷¹ and off-airport as F \$ per hour. Consider comparable car parking services—short or long-term, covered/uncovered and off-airport bundled with dedicated minibus service to the terminal. (For on-airport long-term, a similar minibus service is applicable). The difference

$(N-F)$ \$ per hour will represent the value to the existing mix of ‘car parkers’, *at the margin*, of the locational advantage in time and convenience of on-airport parking (or the money value of its ‘additional utility’). ‘Airport car parkers’ differ in their incomes, trip purpose, ‘urgency’ and so on. Therefore, they will differ also in their willingness-to-pay (and marginal valuation) for the time and convenience (t & c) savings of on-airport spaces: those who value it ‘highly’ will use on-airport while those who value it low will tend to use off-airport.¹⁷² Provided that there is generally no capacity constraints (on and off airport), i.e., no non-price rationing of car spaces, then the marginal value of t & c to on-airport parkers (the lowest willingness-to-pay among the on-airport cohort) will be equal (approximately) to the highest marginal value (and willingness-to-pay) for t & c by off-airport parkers.

The (sub) market structures for car parking are straightforward. The supply of car parking off-airport may be taken as effectively competitive and the supply of on airport parking as monopoly.

However, in order to construct a basis for the presence of ‘*pure monopoly rents*’ it is useful to consider what the outcome for car parking prices would be *if* the supply of on-airport car parking were *competitive*. In this case, the price difference $(N - F)$ would equal the difference in the least cost supply of parking space, including the

¹⁷¹ For the purpose of this outline, it is assumed that the airport does not levy a separate charge on off-airport mini buses ferrying their car-parker clients to the terminal, or any such charge is set at the marginal cost to the airport of such access—which will be very close to zero. If such an access levy (say an average equivalent of \$ FA per car space hour) is ‘significant’, then it represents a component of the exercise of market power by the airport. In terms of the discussion below, this (average) money value could be factored into the method for estimating the location rent of on-airport spaces.

¹⁷² This is where the determination of location rent for the airport parking context poses empirical difficulties substantially greater than the context of agricultural land use and shipment to a freight export centre which corresponds to the original classic work on location rent by von Thünen. In the case of freight, the location rent of different sites of land ‘simply’ corresponds to the freight transport cost savings (per hectare) of one location over another. For passengers (car parkers) the transport cost savings are in time and convenience for which there is no direct market and hence valuation.

location rent of the car space per se and its land component. If the car parking production costs, excluding land, were C (\$ per utilized hour) then the difference $(N - F)$ would be determined by the (money) value of the locational advantage in time and convenience of on-airport parking and this would represent the *location rent* (L) of car spaces—on-airport relative to a base of off-airport. This location rent would be market determined and it would be explicitly observable if on-airport car parking (and its land) was unbundled and its supply was competitive (i.e., not artificially withheld) at the market price. In as much as car parking spaces are essentially homogeneous,¹⁷³ except for location, the willingness-to-pay for time and convenience and its correspondence in a price difference of on versus off-airport car spaces would govern supply and the economic feasibility of different ‘technologies’ of producing car parking. For example, long-term car spaces are typically relatively land intensive and short-term spaces are typically relatively capital intensive, especially on-airport, i.e., single story or multi-story ‘structures’, reflecting the higher land (opportunity cost) to capital price ratio on airport.¹⁷⁴ A bigger or smaller difference would not be sustainable as a market equilibrium one: car parkers would adjust their use of on versus off-airport parking to minimize their total incurred cost (value of total access time to/from terminal plus inconvenience plus money charge for parking). Moreover, since there is essentially free entry into off-airport parking the off-airport price F can indeed be taken to represent long run average cost of supplying off-airport parking. In short, under competitive circumstances the price difference $(N - F)$ would equal the ‘pure location rent’.

If the market price of vacant land at the off-airport ‘base’ was $L(F)$, and car parking unit production costs are C (\$ per occupied space hour)¹⁷⁵ then

$$N = F + L = L(F) + C + L$$

¹⁷³ Quality of service differences in car spaces, such as cover/protection and security are touched upon below.

¹⁷⁴ It is of course possible that the market price of land ‘off-airport’ could exceed the ‘on-airport’ opportunity cost of land; for example, in the case of a capital city airport located close to the city’s CBD (for example, potentially Sydney airport). Since the costs of the other factors used in producing car spaces (capital and labour) are the same on versus off-airport, the production costs (and relative capital intensity) of off-airport spaces would be higher than on-airport (assuming airport relocation is not a justifiable option). Moreover, in this case, higher production costs of competitive off-airport parking push its price up. If on-airport car parking was supplied *competitively*, its lower price would initially undercut off-airport supply—as long as no space rationing on airport occurred. Rationing on airport would be reflected either in a rising marginal opportunity cost of aeronautical-related land (increasing production costs of higher-story structures) or a physical constraint on land available, given aeronautical service obligations. But, under *non-competitive* on-airport conditions, an exercise of market power by the airport would push on-airport prices up as well. Even so, the car parking market equilibrium requires car parking prices to differ by (no more than) the (marginal) value of the time and convenience locational advantage of on-airport relative to off-airport: off-airport sets a ‘datum’ above which on-airport can base its price, ‘exploiting’ the higher t & c valued car parkers. In this case monopoly rents are mixed with land scarcity and ‘pure’ location rents. The empirical difficulties of separating the former are compounded.

¹⁷⁵ Treatment of the utilisation rate of car spaces is taken here as simply an average rate of occupancy which factors up the production cost per physical space to cost per occupied space hour; full utilisation and unsatisfied demand (say in peak periods), non-price rationing, and impacts on demands is set aside.

This, therefore, provides the ‘datum’ for identifying the presence of any monopoly rent that may emerge under monopoly supply of on-airport car parking. If the additional value of the on-airport time savings and superior convenience could be estimated (say, \$ V per car space hour) then V provides an independent estimate of the location rent L .

Under fully competitive car parking conditions:

$$N = L(F) + C + V \quad \text{and}$$

$$(N - F)_{\text{competitive}} = V$$

It follows that the extent to which the price difference ($N - F$) exceeds what the ‘comparable competitive outcome’ would be (that is, V) represents an estimate of any monopoly rent (MR) being extracted by the airport operator. MR is given by:

$$MR = N - F - V$$

Thus, the empirical task surrounds estimating the ‘locational advantage’, V .

As outlined above, ‘limiting marginal valuations’ estimates of V are appropriate, that is, estimates of the ‘maximum’ off-airport and ‘minimum’ on-airport. These should be close in magnitude and provide an estimate of the value of V at the appropriate margins.

This estimation could be done by surveys of parking space users; the methodologies for this are sophisticated but quite well known, and typically involve some form of discrete choice modelling based upon ‘stated preferences’ and nested questionnaire design. (Such designs can also factor in non-location specific differences in the ‘quality’ of car spaces, such as covered versus uncovered.

Alternatively, a much simpler but less definitive method could be applied—and usefully as an initial step. The question of whether monopoly power is being exercised by airports in car parking could be ‘stood on its head’. The difference in car parking charges (for comparable spaces and conditions) on versus off airport could be taken as a difference to be explained by the value (V) of time savings and convenience ‘alone’. With the application of appropriate scaling the ‘shadow’ value VS in \$ per car space hour could be determined. This shadow value would represent the minimum value attributable to all, including marginal on-airport car parkers. This implied value could then be compared with values of time (and to some extent similar convenience) in other travel contexts. The Bureau of Transport and Regional Economics (inter alia) has compiled the results of such studies. If the value of VS was reasonably consistent with valuations in other contexts then the likelihood of the presence of application of monopoly power would be low. Otherwise, it could be argued that there was a prima facie indication of abuse of monopoly power. This outcome could be a ‘trigger’ for the direct methodology outlined above. It would also be of interest to examine in what way this ‘shadow value’ differed across the capital city airports.