J2773
A01/2

COMMERCE COMMISSION

Draft Report

Price Control Study of Airfield Activities at Auckland, Wellington, and Christchurch International Airports

On the 26 May 1998, the Minister of Commerce requested, pursuant to the then section 54(1) of the Commerce Act 1986, that the Commerce Commission report to him on whether price control should be imposed over charges for airfield activities at any or all of Auckland, Wellington, and Christchurch International Airports. In light of the Minister's request, the Commission has conducted a Price Control Study of Airfield Activities. This is a draft of the Commission's report to the Minister of Commerce. Interested parties are invited to make submissions to the Commission on this report.

The Commission: M Belgrave
Dr M Berry
P Rebstock
P Taylor
D Bates QC

Commission Staff: S Brown
M Pickford
M Wydeveld
J Horan
G Searancke
G Thorn

Date of Report: 3 July 2001

TABLE OF CONTENTS

LIST OF APPENDICES

LIST OF TABLES

LIST OF CHARTS

LIST OF ABBREVIATIONS

ACAM	Avoidable Cost Allocation Methodology
ACCC	Australian Competition and Consumer Commission
ACSA	Airports Company South Africa
ADC	Airport Development Charge
AFC	Average Fixed Cost
AIAL	Auckland International Airport Limited
AIC	Average Incremental Cost
Air NZ	Air New Zealand Limited
Airport Authorities Act	Airport Authorities Act 1966
Airport Authorities Amendment Act	Airport Authorities Amendment Act 1997
Airways	Airways Corporation of New Zealand
Amendment Act	Commerce Amendment Act 2001
ARA	Auckland Regional Authority
ARP	Accounting Rate of Profit
ASA	Air Services Agreement
ATM	Air Traffic Movement
Auckland	Auckland International Airport
Australian Airports Act	Airports Act 1996 (Aust)
AVSEC	Aviation Security Service
BAA	British Airports Authority (BAA Plc)
BARA	Board of Airline Representatives Australia
BARNZ	Board of Airline Representatives New Zealand Inc.
CAA	Civil Aviation Authority of New Zealand
CAPEX	Capital Expenditure
CAPM	Capital Asset Pricing Model
CAR	Civil Aviation Rule
CCMAU	Crown Company Monitoring Advisory Unit
Chicago Convention	Convention on International Civil Aviation
Christchurch	Christchurch International Airport
CIAL	Christchurch International Airport Limited
Commerce Act	Commerce Act 1986
Commission	Commerce Commission
Convention	Chicago Convention
CPI	Consumer Price Index
Deed	WIAL Deed relating to airport charges and services dated 1/7/97
Disclosure Regulations	Airport Authorities (Airport Companies Information Disclosure) Regulations 1999
DTB	Domestic Terminal Building
DWL	Dead-Weight Loss
EBIT	Earnings Before Interest and Taxes
EC	European Commission
EIR Act	Electricity Industry Reform Act 1998
FAA	Federal Airports Administration (US)
FAC	Federal Airports Corporation (Aust)
GA	General Aviation
GDP	Gross Domestic Product
HC	Historic Cost
ICAO	International Civil Aviation Organisation
Infratil NZ	Infrastructure and Utilities NZ Limited
ITB	International Terminal Building
LAX	Los Angeles International Airport
London airport companies	Heathrow, Gatwick and Stansted Airports
MAF	Ministry of Agriculture and Forestry
Manchester	Manchester Airport Plc
MC	Marginal Cost
MCTOW	Maximum Certified Take-Off Weight
Minister	Minister of Commerce

	or Minister for Commerce and Enterprise
MMC	Monopolies and Mergers Commission (UK) now Competition Commission
MOT	Ministry of Transport
MOU	Memorandum of Understanding
MRP	Market Risk Premium
MSC	Marginal Social Cost
NERA	Network Economics Consulting Group
NOPAT	Net Operating Profit After Tax
NRV	Net Realisable Value
NZIV	New Zealand Institute of Valuers
ODRC	Optimised Depreciated Replacement Cost
ORC	Optimised Replacement Cost
Prices Surveillance Act	Prices Surveillance Act 1983 (Aust)
PSA	Prices Surveillance Authority (Aust)
PTMRP	Post-Tax Market Risk Premium
Qantas	Qantas Airways Corporation
Qantas NZ	Qantas New Zealand Limited (formerly Ansett New Zealand)
RC	Replacement Cost
RPI	Retail Price Index
SACL	Sydney Airports Corporation Limited
Trade Practices Act	Trade Practices Act 1974 (Aust)
Travers Morgan	Travers Morgan Pty Limited
TSC	Terminal Services Charge
UK	United Kingdom
UK Airports Act	Airports Act 1986 (UK)
UK CAA	UK Civil Aviation Authority
US	United States of America
WACC	Weighted Average Cost of Capital
Wellington	Wellington International Airport
WIAL	Wellington International Airport Limited
WLU	Work-load Unit

LIST OF DEFINITIONS

Acquirer	In the context of Part 4 of the Commerce Act, a person acquiring goods or services (directly or indirectly) from a person who faces limited or lessened competition for the supply of those services.
Aircraft and Freight Activities	Defined in the Airport Authorities Amendment Act 1997 as activities undertaken (including the facilities and services provided) to enable, within a security area or areas of the relevant airport, the servicing and maintenance of aircraft and the handling of freight transported, or to be transported, by aircraft, including: (a) The provision within a security area or areas of the relevant airports, of any one or more of the following: (i) Hangars. (ii) Facilities and services for the refuelling of aircraft, flight catering, and waste of disposal. (iii) Facilities and services for the storing of freight. (iv) Security, customs, and quarantine services for freight. (b) The holding of any facilities and assets (including land) acquired or held to provide aircraft and freight activities in the future (whether or not used for any other purpose in the meantime).
Airfield Activities	Defined in the Airport Authorities Amendment Act 1997 as activities undertaken (including the facilities and services provided) to enable the landing and take-off of aircraft, including: (a) The provision of any one or more of the following: (i) Airfields, runways, taxiways, and parking aprons for aircraft. (ii) Facilities and services for air traffic and parking apron control. (iii) Airfield and associated lighting. (iv) Services to maintain and repair airfields, runways, taxiways, and parking aprons for aircraft. (v) Rescue, fire, safety, and environmental hazard control services. (vi) Airfield supervisory and security services. (b) The holding of any facilities and assets (including land) acquired or held to provide airfield activities in the future (whether or not used for any other purpose in the meantime).
Airport	Defined in the Airport Authorities Act 1966 as any defined area of land or water intended or designed to be used either wholly or partly for the landing, departure, movement, or servicing of aircraft; and includes any other area declared by the Minister to be part of the airport; and also includes any buildings, installations, and equipment on or adjacent to any such area used in connection with the airport or its administration.
Airport Company	Defined in the Airport Authorities Amendment Act 1986 as a company incorporated under the Companies Act 1955 that is for the time being authorised under section 3(3) of the Airport Authorities Act to exercise the powers of a local authority under that section. In other words, a company that is authorised to establish, improve, maintain, operate, or manage an airport.
Airside	The part of an airport inside the security boundary (area).
Allocative Efficiency	Resources are allocated (in both production and consumption) in such a way that no improvement in society's welfare can be made by reallocating those resources.

Apron	Defined in Volume I of Annex 14 to the Convention on International Civil Aviation as a defined are, on a land aerodrome, intended to accommodate aircraft for purposes of loading or unloading passengers, mail or cargo, fuelling, parking or maintenance.
Apron Management Service	Defined in Volume I of Annex 14 to the Convention on International Civil Aviation as a service provided to regulate the activities and movement of aircraft and vehicles on an apron.
Assets	Defined in the Commerce Act 1986 to include intangible assets.
Avoidable Cost	Those costs that would be avoided (saved) if an activity were to cease.
Beta	A measure of the sensitivity of an asset to the market—systematic risk.
Brownfields	The progressive of incremental replacement of assets in the normal course of business, retaining the historical configuration of the assets, but replacing under-utilised and removing redundant assets.
Charge	Defined in the Airport Authorities Amendment Act 1997 as a fee or due and also rent payable under any lease.
Common Cost	A cost that relates to two or more facilities, activities, services, or users and remain unchanged despite changes in the relative proportion of the activities or services.
Direct Cost	A cost that can be identified separately with or traced to a given facility, activity, service or user.
Greenfields	Involves the designing and building of an entirely new optimal network of assets, regardless of historical constraints which may have applied.
Historic Cost	The original cost of constructing or acquiring the asset recognised under generally accepted accounting practice.
Identified Airport Activities	Defined in the Airport Authorities Amendment Act 1997 as any one or more of the following, as the case may be: (a) Airfield activities. (b) Aircraft and freight activities. (c) Specified passenger terminal activities.
Identified Assets	Defined in the Airport Authorities Amendment Act 1997, in relation to a specified airport company, to be the assets of that airport company in relation to identified airport activities.
Incremental Cost	The additional cost imposed by an additional activity or output.
International Airport	Defined in the Civil Aviation Act 1990 as any airport designated as an airport of entry and departure for international air traffic where the formalities incident to customers, immigration, public health, animal and plant quarantine, and similar procedures are carried out.
Landing Area	Defined in Volume I of Annex 14 to the Convention on International Civil Aviation as that area of a movement area intended for the landing or take-off of aircraft.
Landside	All parts of an airport that are not airside.

Lease	Defined in the Airport Authorities Amendment Act 1997 as any form of tenancy and a licence to occupy or use any premises or appliance. The Airport Authorities Act 1966 provides that any airport authority may grant a lease of all or any part of any land, buildings, or installations vested in it for any purpose that will not interfere with the safe and efficient operation of the airport.
Marginal Cost	The additional costs imposed by another unit of output.
Market Risk Premium	The additional premium that investors require to hold the market portfolio (a diversified basket of risky assets) over an above the returns that can be obtained from investing in risk-free assets.
Opportunity Cost	The highest alternative use value of resources used up or pre-empted.
Optimised Depreciated Replacement Cost	An estimate of the most-efficient, lowest-cost combination of assets (from an engineering perspective) which could replace the existing assets and offer the same utility.
Price	Defined in the Commerce Act 1986 to include valuable consideration in any form, whether direct or indirect; and includes any consideration that in effect relates to the acquisition or supply of goods or services or the acquisition or disposition of any interest in land, although ostensibly relating to any other matter or thing.
Replacement Cost	The cost of replacing an existing asset with a substantially identical new assets (based on current market values and technology).
Risk-Free Rate	The interest rate that an investor would earn, or an entity would pay to borrow, on a riskless investment.
Runway	Defined in Volume I of Annex 14 to the Convention on International Civil Aviation as a defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft.
Runway Safety End Area (RESA)	Defined in Volume I of Annex 14 to the Convention on International Civil Aviation as an area symmetrical about the extended runway centre line and adjacent to the end of the strip primarily intended to reduce the risk of damage to an aeroplane undershooting or overrunning the runway.
Runway Strip	Defined in Volume I of Annex 14 to the Convention on International Civil Aviation as a defined area including the runway and stopway, if provided, intended: (a) To reduce the risk of damage to aircraft running off a runway. (b) To protect aircraft flying over it during take-off or landing operations.
Security Designated Aerodrome	Defined in the Civil Aviation Act 1990 as an aerodrome for the time being designated as a security aerodrome under section 82 of this Act.
Services	Defined in the Commerce Act 1986 to include any rights (including rights in relation to, and interests in, real or person property), benefits, privileges, or facilities that are or are to be provided, granted or conferred in trade; and without limiting the generality of the foregoing, also includes the rights, benefits, privileges, or facilities that are or are to be provided, granted or conferred under any of the following classes of contract: (a) A contract for, or in relation to:

(i) The performance of work (including work of a professional nature), whether with or without the supply of goods; or
(ii) The provision of, or the use or enjoyment of facilities for, accommodation, amusement, the care of persons or animals or things, entertainment, instruction, parking, or recreation; or
(iii) The conferring of rights, benefits, or privileges for which remuneration is payable in the form of a royalty, tribute, levy, or similar exaction.

(b) A contract of insurance, including life assurance, and life reassurance.

(c) A contract between a bank and a customer of the bank.

(d) Any contract for or in relation to the lending of money or granting of credit, or the making of arrangements for the lending of money or granting of credit, or the buying or discounting of a credit instrument, or the acceptance of deposits.

But does not include rights or benefits in the form of the supply of goods or the performance of work under a contract of service.

Specified Airport Company — Defined in the Airport Authorities Amendment Act 1997 as an airport company that, in its last accounting period, received revenue that exceeded $10 million, or such other amount of revenue that the Governor-General may from time to time prescribe for the purposes of this definition by Order in Council.

Specified Passenger Terminal Activities — Defined in the Airport Authorities Amendment Act 1997 as activities undertaken(including the facilities and services provided) in relation to aircraft passengers while those passengers are in a security area or areas of the relevant airport, including:

(a) The provision, within a security area or security areas of the relevant airport, of any one or more of the following:
(i) Passenger seating areas, thoroughfares, and airbridges.
(ii) Flight information and public address systems.
(iii) Facilities and services for the operation of customs, immigration, and quarantine checks and control.
(iv) Facilities for the collection of duty free items.
(v) Facilities and services for the operations of security and Police services.

(b) Any activities undertaken (including the facilities and services provided) in a passenger terminal to enable the check-in of aircraft passengers, including services for baggage handling.

(c) The holding of any facilities and assets (including land) acquired or held to provide specified passenger terminal activity in the future(whether or not used for any other purpose in the meantime);-but does not include the provision of any space for retail activity.

Stand-Alone Cost — The cost incurred in providing only one service.

Stopway — Defined in Volume I of Annex 14 to the Convention on International Civil Aviation as a defined rectangular area on the ground at the end of a take-off run available prepared as a suitable area in which an aircraft can be stopped in the case of an abandoned take-off.

Substantial Customer — Defined in the Airport Authorities Amendment Act 1997 as, in relation to an airport company, any person that paid or was liable to pay, that airport company in relation to identified airport activities in that airport company's last accounting period or payable in that airport company's last accounting period

	an amount that exceeded 5% of the revenue paid or payable to that airport company during that accounting period in relation to those activities.
Sunk Cost	A cost that, once incurred, cannot be recouped.
Supply	Defined in the Commerce Act 1986 as follows: (a) In relation to goods, includes supply (or resupply) by way of gift, sale, exchange, lease, hire, or hire purchase. (b) In relation to services, includes provide, grant or confer.
Taxiway	Defined in Volume I of Annex 14 to the Convention on International Civil Aviation as a defined path on a land aerodrome established for the taxiing of aircraft and intended to provide a link between one part of the aerodrome and another, including" (a) Aircraft stand taxilane – a portion of an apron designated as a taxiway and intended to provide access to aircraft stands only. (b) Apron taxiway – a portion of a taxiway system located on an apron and intended to provide a through taxi route across the apron. (c) Rapid exit taxiway – a taxiway connected to a runway at an acute angle and designed to allow landing aeroplanes to turn off at higher speeds than are achieved on other exit taxiways thereby minimising runway occupancy times.
Variable Cost	A cost that varies with changes in output.
Work-Load Unit	Equivalent to 1 passenger or 100Kg of freight.

EXECUTIVE SUMMARY

INTRODUCTION

1. The Commerce Act 1986 (the Commerce Act) is an Act to promote competition in markets for the long-term benefit of consumers within New Zealand. Where markets fail to deliver competitive outcomes and fail to operate efficiently, Parts 4 and 5 of the Commerce Act contain provisions providing for the control of the prices, revenues and quality standards of goods and services. The Commerce Act is enforced by the Commerce Commission (the Commission).

2. Section 53 of the Commerce Act provides that the Governor-General may impose control over the supply of goods or services on the recommendation of the Minister. The effect of goods or services being controlled is that they have to be supplied in compliance with an authorisation made by (or undertaking accepted by) the Commission.

3. In considering whether to make a recommendation that goods or services be controlled, the Minister can seek advice from the Commission under sections 54 and 56 of the Commerce Act.

NOTICE FROM THE MINISTER

4. Pursuant to the former section 54 of the Commerce Act, the Minister has required the Commission report to him as to whether it considers any of the airfield activities supplied by Auckland International Airport Limited (AIAL), Wellington International Airport Limited (WIAL) or Christchurch International Airport Limited (CIAL) should be controlled. Chapter 1 outlines the full details of the Minister's Notice.

5. Airfield activities are one of a number of activities undertaken by airport companies. The Airport Authorities Act 1996 defines airfield activities as the activities undertaken (including the facilities and services provided) to enable the take-off and landing of aircraft. Airfield activities are specifically defined to include the following:

- Airfields, runways, taxiways, and parking aprons for aircraft.
- Facilities and services for air traffic and parking apron control.
- Airfield and associated lighting.
- Services to maintain and repair airfields, runways, taxiways, and parking aprons.
- Rescue, fire, safety and environmental hazard control services.
- Airfield supervisory and security services.

6. Auckland, Wellington and Christchurch International Airports are the three biggest airports in New Zealand by total revenue and volume (aircraft movements, passenger numbers and freight volumes).

7. AIAL, WIAL and CIAL are under a mix of public and private ownership. The shares of AIAL are listed on the New Zealand Stock Exchange, with minority local government shareholders. WIAL is majority owned by Infrastructure and Utilities NZ Limited, with the balance being owned by local government. CIAL remains entirely publicly owned, with local government as the majority shareholder and the Crown having a minority interest. Regardless of ownership, the airport companies are run as commercial undertakings (as required by the Airport Authorities Act).

8. Under section 4 of the Airport Authorities Act, airport companies have the right to set such charges as they think fit, after consultation with substantial customers.

9. Since receiving the section 54 Notice dated 26 May 1998, the Commerce Act has been amended by the Commerce Amendment Act 2001 (the Amendment Act). The Amendment Act repealed Parts IV and sections 70-74 to Part V of the Commerce Act.

10. Although the Notice was issued under the old provisions of Part IV of the Commerce Act, the Commission, in making its recommendations to the Minister, intends to consider the new Part 4 and new sections 70-74, as amended on the basis that the Minister has to consider, and make a decision based on, the Commission's report under the amended provisions of the Act. The limiting of Part 4 to control of prices is removed and the Commission can now control prices, revenues and quality standards. As a result, while the Notice refers only to price control, the Commission intends to make recommendations in respect of the control of prices, revenues and quality standards for the airfield activities at Auckland, Wellington and Christchurch International Airports. This draft report is written in the context of the new provisions of the Commerce Act.

WHEN CONTROL CAN BE IMPOSED

11. Before making a recommendation that airfield activities be controlled, the Minister must be satisfied that the requirements of section 52 of the Commerce Act are met. These requirements are as follows:

    (a) The goods or services (in this case, airfield activities) are, or will be, supplied or acquired, in a market in which competition is limited or is likely to be lessened.

    (b) It is necessary or desirable to impose control in the interests of the persons acquiring (directly or indirectly) the goods or services.

12. The Minister has asked the Commission to report on whether there is evidence that these requirements are met for the airfield activities supplied by any of AIAL, WIAL or CIAL. He has also asked the Commission to advise on thresholds it considers useful in making that assessment.

13. If the requirements of section 52 are met, the Minister still has a discretion as to whether to recommend control. In this regard, the Minister has asked the Commission

whether market conditions are such that it considers that he should recommend control of any of the airfield activities supplied by AIAL, WIAL or CIAL.

LEGAL FRAMEWORK

14. Sections 52 to 54 of the Commerce Act, read in conjunction with the Minister's request of 26 May 1998, require that the Commission address three key issues.

15. The first is to assess whether competition is limited or is likely to be lessened: see section 52(a) and paragraph A of the Minister's letter. This requires an assessment of both structural and behavioural considerations within the context of the relevant markets.

16. The second issue is whether control is necessary or desirable in the interests of acquirers or suppliers: see section 52(b) and paragraph A of the Minister's letter. The focus here is on the economic welfare of the acquirers of airfield activities (both direct and indirect acquirers). This has involved an analysis of the current market situation (the counterfactual), relative to the potential benefits and detriments to acquirers arising from control. In order to undertake such an analysis, the Commission has considered what form of control might possibly be imposed.

17. So as to consider whether control is necessary or desirable the Commission has examined the pricing behaviour of the airport companies, relative to what it considers to be appropriate pricing principles. An examination of the pricing of airfield activities has required the Commission to consider issues such as asset valuation, weighted average cost of capital (WACC) and cost allocation. Any effects that other airport activities may have on the pricing of airport activities are considered in the analysis where appropriate.

18. The third issue is to make a recommendation on whether control should be imposed. In this assessment, the Commission addresses such discretionary considerations as may be relevant: the discretionary nature of the Minister's power to impose control is reflected in the Minister's instruction in paragraph B (whether he should recommend control). This brings into consideration the wider net benefits test. The focus here is on the interests of the economy as a whole. The aim is to maximise economic efficiency regardless of which particular individuals receive the benefits.

LIMITED COMPETITION

19. If airfield activities are supplied in a market in which competition is "limited", then section 52(a) is satisfied. In considering this question, the Commission has firstly asked whether competition is currently limited. Failing a finding that competition is limited, the Commission would then ask whether competition is likely to be lessened. In this draft report, the Commission has found it unnecessary to go beyond the first step, having reached the preliminary view that competition is limited. The Commission's analysis of competition in the supply of airfield activities is contained in chapter 5 of this draft report.

Relevant Markets

20. To provide a framework within which to analyse whether competition might be "limited", the Commission has defined the market(s) related to the supply of airfield activities. In defining the relevant market(s), the Commission has taken account of the relationships between "airfield activities", which are the specific focus of the inquiry, and other activities undertaken by the airport companies. It has defined markets for areas outside of airfield activities in order to facilitate its analysis of whether airfield activities are supplied in market(s) in which competition is limited.

21. Goods and services are grouped together in markets where they have similar demand characteristics (are substitutes) or are connected in terms of supply.

22. In this draft report, the Commission has identified the following markets as being relevant to its analysis:

- *The aircraft movement market*, which encompasses the services and facilities for the movement of aircraft (landing and take-off; aerodrome control; aircraft maintenance; and aircraft ancillary services).

- *The passenger aircraft access market*, which encompasses the services and facilities provided to process arriving and departing passengers.

- *The freight aircraft access market*, which includes the services and facilities for the handling of air-transported freight.

- *The airport access and utilities market*, which encompasses the services and facilities for the accessing and functioning of the airport and its facilities.

- *The commercial activities market*, which includes the services and facilities for the conduct of retail and commercial activities, either in the terminal buildings or elsewhere on the airport site

23. Airfield activities make up part of the aircraft movement market, as defined above.

Constraints on Market Power

24. Having defined the relevant markets, the Commission has gone on to consider whether any of the three airport companies are able to exercise market power in the aircraft movement market, such that competition could be seen to be "limited" (in terms of section 52 of the Commerce Act). In doing this, it has considered whether or not sufficient constraints (including both structural and behavioural aspects) exist. The possible constraints on an airport's exercise of market power may include the potential competition between airports or from other modes of transport; the possibility of new entry; the potential countervailing power of airlines; the regulatory control of airports; and competition from off-airport sources of supply.

25. The competition faced by the airfield activities at airports from those at other airports may be of two kinds: the *existing* competition from other airports already operating, and the *potential* competition from prospective new entrants. The Commission's

preliminary view is that the nature of the investment in a major airport facility, such as those at Auckland, Wellington and Christchurch, is likely to be such that barriers to entry are high, and hence that competition from potential entrants is low. The extent of existing competition for airfield activities depends largely on the degree to which airports are substitutes for one another. The Commission's preliminary view is that there is some scope for supply-side substitution for general aviation aircraft given the presence of small airfields in the vicinity, but not for larger (commercial) aircraft. There are not substantial near entrants to compete effectively with the three large airports for domestic and international traffic.

26. The pricing of airfield activities appears to have little impact on demand. The airfield activities supplied by one airport are not seen on the demand-side as substitutable for another airport—demand is driven by the destination to which passengers want to go. Alternative modes of transport are also unlikely to provide a constraint on the behaviour of airport companies. The Commission's preliminary estimate of the elasticity of demand for airfield activities at each of the three airports is -0.105.

27. The current regulation of airports relies largely upon the countervailing power of airlines, the requirements on airport operators to consult with them before setting charges, and the threat of further regulation. However, analysis suggests that meeting demand for flights is the overriding factor determining which airports an airline flies to, rather than the costs of doing so, and that airlines' countervailing power is limited. Airport charges, although not insignificant to airlines, are unlikely to make the difference between an airline flying or not flying to a particular city, although there is some elasticity at the margin. Each of the airports is, therefore, unlikely to find itself constrained by the behaviour of its users. In fact, on occasions, it seems likely that airlines may stand to lose greater amounts than airports from withdrawing custom, losses that may not be recovered through any concessions won from the airport.

28. The Commission's preliminary view is that there are insufficient constraints on AIAL's, WIAL's and CIAL's ability to exercise market power in the supply of airfield activities. Each operates largely within its own geographically distinct regional aircraft movement market, which are the greater population areas around the three airports (namely the greater Auckland, Wellington and Christchurch areas). Each airport faces demand from acquirers who do not see the other airports as offering viable substitute services.

Competition "Limited"

29. In respect of section 52(a), the Commission's preliminary view is that the airfield activities supplied by AIAL, WIAL and CIAL are supplied in markets in which competition is limited. The goods or services (falling within the definition of airfield activities) provided by the three major international airports that the Commission considers are subject to limited competition are shown in the following table:

	Goods and Services Supplied		
Airfield Activities	**by AIAL**	**by WIAL**	**by CIAL**
Airfields, runways, taxiways, and parking aprons for aircraft	Airfields, runways, taxiways, and aprons.	Airfields, runways, taxiways, and aprons.	Airfields, runways, taxiways, and aprons.
Facilities and services for air traffic control	Land beneath Airways Control Tower	None.	Provision of Control Tower on top of terminal.
Facilities and services for parking apron control	Apron control service at the international terminal apron.	Apron supervision vehicles.	None.
Airfield associated lighting	Cable ducts and light pots for the entire airfield; cabling for light fittings for aprons and first taxiways; and apron lights.	Stand lighting and noise in guidance units.	Apron flood lighting.
Services to maintain and repair airfields, runways, taxiways, and parking aprons for aircraft	Services to maintain and repair airfields, runways, taxiways, and parking aprons for aircraft.	Supervision of maintenance by independent contractors.	Day-to-day maintenance (grass moving, pavement sweeping, and patching). Major maintenance contracted out.
Rescue, fire, safety, and environmental hazard control services	Rescue, fire, safety, and environmental hazard control services.	Provision of rescue fire service and airside services team. The airside services team monitor the safety of the apron, conduct runway checks, co-ordinate airside works, look after bird and hazard control, and monitor airside rules.	Rescue, fire, safety, and environmental hazard control services.
Airfield supervisory and security services	Provides and maintains security fencing and leases space to AVSEC.	Provision and maintenance of security fencing, perimeter patrols, and management of systems.	Provision and maintenance of security fencing and perimeter patrols.
Facilities/assets held for future airfield activities	Holding of land.	Residential properties bordering airfield.	Holding of Land.

PRICING PRINCIPLES

30. The Commission is of the view that the positive characteristics of a competitive market are appropriate considerations when inquiring into the appropriateness of current prices. The outcomes achieved by competitive markets are a benchmark against which to compare the outcomes in other types of markets. In this regard, the Commission has developed pricing principles that provide a framework within which it can evaluate whether the airports are achieving efficient outcomes at normal returns.

31. The Commission's preliminary view is that the following general pricing principles are appropriate:

- Prices should be as close as possible to their allocatively efficient level over the medium-term. Prices should be commensurate with the desired level of service quality and based on appropriate costs (productively, and dynamically, efficient costs). Prices should encourage efficient use of a supplier's facilities and avoid cross subsidisation. Today's consumers should only bear today's costs.

- Prices should allow for a "normal" rate of return to be earned by suppliers on average over the medium term. Normal returns should be based on an appropriately determined asset base and rate of return. Returns which are greater, or lesser, than this normal rate should reflect superior, or inferior, performance respectively.

- Prices should on average, over the medium term, cover efficient operating costs (including any temporary deviations resulting from unexpected changes in external factors), and no more.

- Prices should send appropriate signals for determining whether new investment (or divestment) would be efficient.

ASSET BASE

32. In competitive markets, prices are set independently of asset values, and the current value of a business or an asset is able to be determined from the total present value of the cash flows it can generate—prices *determine* the value of assets. However, where markets are not competitive (as with airfield activities), prices may be *dependent on* the value of assets.

33. Asset valuation is relevant both for the purposes of determining price for, and of assessing performance of, airfield activities. The value of the asset base is, therefore, an input into the consideration of whether control of airfield activities is necessary or desirable in the interests of acquirers, and whether it is recommended. The higher the asset valuation, the higher the revenue needed to generate the required return on assets, and the higher the prices need to be.

34. In order to examine airfield activities, the Commission has determined what it considers to be the appropriate principles to be used in arriving at an airport's asset base. In formulating its views expressed on land valuation in this draft report, the Commission has obtained independent advice from valuers Telfer Young on the appropriateness of the methodologies adopted by the airports and/or their valuers, the consistency of methodology across airports and the robustness of the application of the valuation principles. A copy of their initial report to the Commission is included in appendix 11 to this report. Full discussion of issues regarding asset base are contained in chapter 7.

35. In economic terms, the relevant costs on which to determine an asset base are opportunity costs. The cost of employing an asset in one use is what the owners' forego in not receiving the returns that it could earn in the next best alternative use. The draft report distinguishes between land and specialised airfield assets.

Valuation of Airfield Land

36. In most cases, land does not depreciate and is not subject to technological obsolescence. Furthermore, unlike some other airport assets, it has an alternative use and, consequently, has an opportunity cost greater than zero.

37. Valuing airfield land at opportunity cost provides appropriate signals to either continue operating the land in its existing use (as an airfield) or to put the land to alternative use and relocate the airport. It also provides the appropriate incentives for new investment.

38. Opportunity cost should be determined based on the highest alternative use value of airfield land. Hence, land value should not include the cost of getting the land to a stage where it could be used as an airport. Such costs are more appropriately included within the costs of any land improvements, such as runways, taxiways and aprons.

39. The relevant alternative use may differ from airport to airport, and may depend on the underlying zoning of the land. Potential alternative uses are residential, commercial, industrial and rural. The airports have made various assumptions regarding the alternative uses of their land. The alternative use will to some extent depend on the underlying zoning of the airfield land.

40. While the Commission's valuers were critical of the airports' approaches to land valuation in a number of respects, the methodologies were found to be in line with valuation standards. In determining appropriate land values for inclusion in the asset base, the only adjustment that the Commission has made to the airports' values is to optimise out some land. It would also be appropriate to make adjustments for any costs of getting the land to a stage where it could be used as an airport, to the extent that they have been included in the airports' land values. However, no such adjustment has been made to the values used in this draft report, due to a lack of information.

Valuation of Specialised Airfield Assets (Runways, Taxiways and Aprons)

41. Airfield sealed surfaces are specialised assets as they have "a utility which is restricted to particular uses" and "rarely, if ever, traded" other than as part of the sale of an entire airport (or the shares thereof). For the bulk of such assets, there is no established market and, therefore, no comparable sales or market evidence by which the individual assets can be valued. Economically, the assets are sunk as they have, for the most part, no alternative use.

42. In the case of sunk assets, opportunity costs are non-existent. Such assets are being used in their best use, and there is no alternative use. The cost of specialised airfield assets are sunk and cannot be recovered if the service is discontinued. For such assets, opportunity costs are zero. However, valuing the assets at zero may affect the long-term viability of the owner of the assets. Airports need to be able to recover the costs of, and earn a return on, specialised airfield assets in order to preserve the incentives to continue to invest in them. Alternative approaches to deal with this issue are valuations at replacement or historic costs.

43. The Commission's preliminary view is that specialised airfield assets should be included in the asset base at historic cost. The assets should also be depreciated and optimised as appropriate. The use of replacement cost would run contrary to the Commission's view that today's acquirers of airfield activities should only bear today's costs. Historic cost is consistent with the fundamental principles adopted by the Commission. It provides investors with a return on the amounts invested, and preserves incentives to invest in the future. Investors are compensated for inflation through the use of a nominal WACC.

44. In determining appropriate values of specialised assets for inclusion in the asset base, the Commission has optimised out any assets that are not "used and useful". The major adjustment to the value of specialised assets has been to include them in the asset base at historic cost rather than at the Optimised Depreciated Replacment Cost values adopted by the airports. The costs of getting land to a stage where it could be used as an airport are assumed to be included within the historic costs of any land improvements, such as runways, taxiways and aprons.

Optimisation

45. A condition for efficient pricing is that the costs that should be recovered through pricing are those that reflect the least cost of production or "efficient production". The Commission's preliminary view is that only those assets that are currently "used and useful" should be included in the asset base on which a rate of return is calculated. All other assets should be optimised out.

46. In this draft report, the Commission has optimised out any land held for future development of an airfield, the seabeds at Auckland International Airport, and has excluded the separate value determined and included by AIAL regarding its seawall.

47. The seabed approaches at Auckland International Airport are flown over by aircraft when landing and/or taking off from the airport. In this regard, they are no different to the approaches across the sea at Wellington International Airport. The only difference is that AIAL happens to own part of the seabed, even though it does not need to do so for operational purposes. Statutory planning documents provide adequate protection, without the need for AIAL to own the land. For this reason, the seabed has been optimised out. In its recent decision on prices in August 2000, AIAL optimised out part of its seabed. The Commission has optimised out the remaining seabed.

48. Given that the runways at Auckland and Wellington International Airports are bounded in part by water, and lie partially on reclaimed land, seawalls are in place to protect the runway land from erosion. The seawalls are essential to the existence of the land and form part of the value of the runway land. Seawalls do not have a separate value, but are included in the value of land. The Commission's preliminary view is that the separate seawall value should be excluded from the asset base of AIAL.

49. While land acquired or held to provide airfield activities in the future is included within the statutory definition of airfield activities, it does not follow that it is required to be included in the asset base for determining today's prices of airfield activities.

The Commission considers that a return should generally not be sought from airfield users on any land held for the development of airfield activities—that is, until it is "used or useful". For this reason, land held for the development of airfield activities has been optimised out.

New Investment and Pre-Financing

50. Growth in aircraft movements will require investment in additional runway capacity at airports from time to time. However, future demand by users is uncertain. Airport companies must make decisions to invest in additional capacity despite these future uncertainties. It may not be desirable for airport companies to delay investment until demand exceeds capacity. Equally, it is not desirable from an efficiency perspective for airport companies to over-invest in facilities.

51. Expansions in airport capacity can be 'lumpy'. Hence, assets can initially be greater than necessary relative to initial demand, but as demand grows, the assets will be used more fully. Eventually, full capacity will be reached, and new capacity will be required.

52. Decisions on future investment are important for dynamic efficiency. Ideally investment planning should aim to make sure there is an appropriate level of investment to support production, i.e., no excess, or under, capacity. Any new investment should be based on reasonably anticipated future demands.

53. The Commission's preliminary view is that pre-financing of new investment is generally inappropriate—only "used and useful" assets should be included in the asset base. This should encourage airports only to undertake new investments that will be "used and useful".

54. The cost of new investment in land that is eventually included in the asset base should include the capitalised costs of financing construction and any holding costs of land (less any revenue that may have been derived from former use of the land), up to a cap of opportunity cost.

Approach to Determining Asset Base

55. The Commission's preliminary view is that the determination of the asset base for airfield assets should be based on the following principles:

- Specialised airfield assets should be valued at historic cost.
- Airfield land should be valued at opportunity cost.
- Historic costs should be depreciated to reflect any remaining useful life of the assets. Assets that have infinite lives such as land are not depreciated. Other properly maintained assets may not reduce in their usefulness, and may not need to be depreciated.
- Airfield assets that are not "used or useful" should be optimised out.

- The costs of investments in new capacity should be included in the asset base when the airfield assets become "used or useful". The cost of new investment in land that is eventually included in the asset base should include the capitalised costs of financing construction and any holding costs of land (less any revenue that may have been derived from former use of the land), up to a cap of opportunity cost.

Appropriate Asset Base

56. Having formulated the principles by which an asset base should be determined, the Commission has gone on to derive estimates of what it considers to be appropriate values for the airfield assets of AIAL, WIAL and CIAL. Sealed surfaces have been included in the asset base at depreciated historic cost (where historic cost is the vesting value), and land at opportunity cost. Assets have been optimised as appropriate. Land values are based on advice that the Commission received from Telfer Young. The difference in per hectare land values across the airports is largely attributable to location.

57. The current asset base for the pricing of airfield activities considered appropriate by the Commission, compared to the figures adopted by the airports, are shown in the tables below.

AIAL Airfield Asset Base

	Amount ($000s)
AIAL Valuation 30 June 1999	**$ 312,751**
Adjustments by AIAL for Pricing Purposes 2000	-27,504
Optimisation of Seabed	-9,800
Optimisation of Seawall	-2,101
Optimisation of Second Runway Land	-36,757
Adjustment to Sealed Surfaces Value (ODRC to HC)	-49,773
Commission Asset Base	**186,816**

WIAL Airfield Asset Base

	Amount ($000s)
WIAL Valuation 31 March 2000	**$ 96,387**
Adjustment to Exclude Work in Progress	-1,177
Adjustment to Sealed Surfaces Value (ODRC to HC)	-26,407
Commission Asset Base	**68,803**

CIAL Airfield Asset Base

	Amount ($000s)
CIAL Valuation 30 June 1999	**$ 41,930**
Adjustments by CIAL for Pricing Purposes 2000	-381
Adjustment to Sealed Surfaces Value (ODRC to HC)	-13,491
Add back of Reseal Reserve	6,633
Commission Asset Base	**34,691**

TARGET RETURN (WACC)

58. Weighted average cost of capital (WACC) is the weighted average cost of each new dollar of capital raised at the margin. In the simplest terms, it is the cost of debt and the cost of equity weighted by the proportion of debt and equity. Like asset base, it is relevant both for the purpose of determining prices and for the purpose of assessing performance. It is the element of the pricing models that allows for a required rate of return to be earned by debt and equity security providers.

59. The Commission has determined what it considers to be an appropriate WACC (target return) for the airfield activities of each airport. In formulating its views expressed on WACC in this draft report, the Commission has obtained independent advice from Dr Martin Lally on the appropriateness of the WACC estimates most recently adopted by the airports and the robustness of the airports' justification for those estimates. A copy of his initial report to the Commission is included in appendix 12 to this report. Full discussion of issues regarding WACC are contained in chapter 8.

60. Key determinants of WACC are the risk-free rate, debt premium, market risk premium, asset beta and leverage.

Risk-free Rate

61. The risk-free rate is the interest rate that an investor would earn, or an entity would pay to borrow, on a riskless investment. Rates for Government stock are usually used to approximate the risk-free rate.

62. In determining the appropriate risk-free rate, the Commission has firstly considered what term (maturity) of the rate to use. Alternatives considered were to use the maturity corresponding to the period for which prices are set, or the life of airfield assets. The Commission's preliminary view is that the risk-free rate should match the revision frequency of pricing. Prices are set by the airports for upwards of 5 year periods due to the requirement to consult with substantial customers every 5 years on charges. However, both AIAL and CIAL have recently set prices for a period of three years.

63. Having determined the appropriate maturity date to use, the Commission then turned to the question of how to set the rate. Options identified involved using the range over the relevant period, the midpoint, the endpoint, an average of the beginning and ending rates for the period, or the average over the period. The selection of the rate is important, as risk-free rates vary daily. The Commission's preliminary approach is to use an average on Government stock over the period in which an airport consults with its substantial customers (ending with the point at which any new prices come into effect) and with a maturity matching the point at which prices will again be reviewed (at maximum five years).

64. In analysing the efficiency implications of the recent price increases for the airfield activities of AIAL and CIAL, the Commission has used a risk-free rate of 6.92%. This represents the yields on three year Government stock averaged over the six month period prior to the point at which AIAL's new prices came into effect (1 September 2000)—namely, the period March to September 2000. To be consistent,

the same rate of 6.92% is used for the purposes of analysing CIAL's current prices. For WIAL, the rate should be the average yield on five year Government stock in the six months preceding 1 July 1997, when the current price formula was settled for the next five years. This figure is 7.47%.

65. For assessing historical performance on an annual basis (and on average over time), the Commission's preliminary approach is to adopt the range of the risk-free rate for the appropriate financial period.

Debt Premium

66. The debt premium determines the premium over and above the risk free rate that is required by investors for holding the debt. It reflects marketability and exposure to the possibility of default.

67. The Commission's preliminary view is that a debt premium of 1% above the risk-free rate is appropriate for all three airports.

Market Risk Premium

68. The Market Risk Premium (MRP) represents the additional premium that investors require to hold the market portfolio—a diversified basket of 'risky' assets—over and above the returns that can be obtained from investing in risk-free assets.

69. A number of approaches can be used to estimate MRP. The common approach is to observe difference between the ex-post risk-free rates and market returns and calculate an arithmetic average over a number of years. Other methods involve examining market volatility changes over time (looking at variances and standard deviations), estimating growth in market dividends, and considering estimates of market risk premium for foreign markets.

70. The Commission's preliminary view is to adopt a post–tax MRP of 8%. The various approaches to estimating market risk premium all suggest a figure of 8% rather than 9%.

Asset Beta

71. Risk relates to the possibility that expected returns may not actually materialise. The total risk of an asset or business is made up of both diversifiable risk and undiversifiable risk. Beta measures the sensitivity of an asset to the market—its undiversifiable (or systematic) risk.

72. Looking at an entity as an asset in a portfolio, the beta of an entity measures the sensitivity of an entity's cash flows to changes in the economy that impact on asset values and returns (not the specific risk associated with investing in a particular company). It is a relative concept and specifically measures the sensitivity of returns to changes in the returns of the market. The higher the beta, the more volatile and risky the asset.

73. Beta may or may not be able to be estimated directly. Betas can only be directly estimated for listed companies, and only with any degree of accuracy where there is data for a significant period and for a significant number of entities. Where a beta cannot be estimated directly, a proxy or surrogate beta can be estimated by making adjustments for differences in gearing to the betas of entities or assets with similar activities and risks.

74. Characteristics important in assessing the suitability of comparators include the nature of the firm's output, the nature of the customer, the duration of any contracts with customers, the extent of any regulation, degree of monopoly (i.e. the price elasticity of demand), the nature of options for expansion, operating leverage, market weight, and capital structure.

75. In the case at hand, the regulatory environment is fundamental to the performance of the airports and is, therefore, the dominant factor considered in choosing comparators. The Commission has adopted benchmarks for asset beta based on United States firms engaged in electricity generation and/or distribution which are subject to rate of return regulation (that almost guarantees them a certain rate of return), and firms in the United Kingdom subject to RPI-X price caps. Other airports are not used as comparators because there is not sufficient data to arrive at reasonable estimates.

76. The average asset betas of regulated US and UK entities are 0.36 and 0.56, respectively (adjusting for New Zealand market leverage). The risk of the airfield activities of AIAL and CIAL is considered to fall between the bounds of regulated US and UK entities (0.36 to 0.56 Australian converted), implying an asset beta of 0.46 (the mid-point), rounded to 0.45 within a range of 0.4 to 0.5.

77. The Commission notes that CIAL's beta may in fact be higher than AIAL's, but it has been unable to estimate accurately the difference. CIAL's beta may be higher as its high proportion of domestic traffic (relative to Auckland) means that it is likely to experience greater shocks from changes in the domestic economy. However, the Commission is limited to using a domestic CAPM and, therefore, this factor has not been able to be taken into account.

78. The Commission notes that AIAL's and CIAL's betas may be higher than that for the electricity comparators used, as airports are likely to experience greater demand shocks. However, no adjustment has been made for this due to difficulties in estimating accurately by how much to adjust beta.

79. In the case of WIAL, its deed with airline customers allows for charges to be adjusted annually if the actual movements and/or operating costs from the previous year differ from forecasts, or if inflation exceeds certain levels. The provisions of its current deed suggests that WIAL's risk is closer to that of US rate of return regulated entities than UK price-capped entities. This implies a beta in a range of 0.3 to 0.35.

Leverage

80. If a company has no debt—is entirely financed by equity—its asset and equity beta are identical. By adding debt to a company's capital structure, the shareholding becomes more risky, reflected in its equity beta becoming greater than its asset beta.

The level of systematic risk associated with equity (the equity beta) is magnified according to the proportion of debt in the funding mix. The greater the proportion of debt, the greater the systematic risk associated with the residual profits available for distribution to shareholders, and the greater difference between its asset and equity betas. For otherwise identical investments, a company with more debt in its capital structure will have a higher equity beta and a higher required rate of return on equity than one with less debt.

81. A leverage rate is used to determine the cost of equity, and also to weight the costs of debt and equity into the derive WACC. The leverage (or debt) ratio reflects the proportion of total assets that are funded by debt (as opposed to equity).

82. A number of alternatives exist to determine the appropriate debt ratio. However, the Commission considers that the current leverage ratio based on the market values of debt and equity is most appropriate (given the debt premium used).

83. The appropriate market value weights of debt and equity can easily be computed for AIAL. Taking the book value of debt as a proxy for market value of debt, and dividing the number of issued shares multiplied by the current share price, results in a debt ratio of 25% for AIAL. For the purposes of its analysis, the Commission has also used a 25% debt ratio for WIAL and CIAL.

Appropriate WACC

84. For the purposes of this draft report, the Commission's has chosen to use a nominal post-tax WACC in order to be consistent with its approach to asset base, and its analysis of historical returns.

85. Each airport can have its own unique characteristics which can result in a distinct risk profile and WACC. The Commission considers that the appropriate WACC for the airfield activities of each of the airports are as follows:

	Auckland	**Wellington**	**Christchurch**
R_f	6.92%	7.47%	6.92%
t_c	33%	33%	33%
t_{int}	33%	33%	33%
PTMRP	8%	8%	8%
Debt Premium	1%	1%	1%
R_d	7.92%	8.47%	7.92%
W_d	25%	25%	25%
W_e	75%	75%	75%
β_a	0.4 to 0.5	0.3 to 0.35	0.4 to 0.5
β_e	0.53 to 0.67	0.40 to 0.47	0.53 to 0.67
R_e	8.90 to 9.97%	8.20 to 8.74%	8.90 to 9.97%
Nominal Tax-Adjusted WACC	8.0 to 8.80%	7.57 to 7.97%	8.0 to 8.80%

86. In contrast, the values adopted by the airports recently were 8.5-9.4% for AIAL, 9.5-11.5% for WIAL and 10.15% for CIAL.

ALLOCATIVE EFFICIENCY AND CROSS-SUBSIDISATION IN PRICING

87. In general terms, the price for each good or service should be set where the marginal cost of supply equals demand, so that the ensuing quantity produced maximises economic welfare (or allocative efficiency). In the airfield activities context, setting prices in this way potentially encounters a number of difficulties:

- Efficiency requires that separate products are priced separately according to the marginal cost of supply. However, the administrative cost of having separate charges has to be taken into account, especially when the cost of each service is small. It might also be commercially impractical to measure each user's marginal cost and to charge accordingly. Consequently, an approach commonly adopted by airports is to set prices for a limited number of groups of users (although this may not necessarily generate efficient prices).

- A characteristic of the cost structure of an airport's airfield activities is the high proportion of fixed costs. As a consequence, average cost is likely to be greater than marginal cost. As a result, setting efficient prices at marginal cost would produce financial deficits. The Commission considers that airports should be able to recover the total costs of airfield activities (both fixed and common costs), and, as a result "first best " pricing would not be financially viable.

- Airports, because they offer a variety of services to a variety of users, have the potential through their charges to engage in cross-subsidisation. Cross-subsidisation can arise where individual users do not pay enough to cover the additional costs they impose on the provider, or where a service as a whole does not recoup its costs from users. Cross-subsidisation is economically inefficient because some users contribute towards the cost of the services enjoyed by others, implying that prices diverge from marginal cost.

88. The Commission has assessed to what extent the structure of prices for airfield activities are allocatively efficient, and whether there is any cross-subsidisation. Full discussion of issues regarding airfield pricing and cost allocation are contained in chapter 9.

Are Prices Allocatively Efficient?

89. The Commission's preliminary view is that the costs of airfield activities should be recovered as efficiently as possible by using pricing structures that adhere as closely as possible to Ramsey principles. Under Ramsey pricing, the price for each user (or group of users) would be set by adding a percentage mark-up on marginal cost, with the size of the mark-up being inversely proportional to the price elasticity of demand of that user or group of users. The mark-ups are scaled up until revenues in aggregate cover costs. By this means, airfield costs would be allocated more heavily to those with the greatest willingness to pay; that is to say, those users least sensitive to price increases pay the highest mark-ups, and vice versa. As a result, the size of the departures of output volumes from marginal cost pricing are minimised (allocative inefficiency is minimised), subject to satisfying the financial break-even constraint.

90. The airports typically determine charges on the basis of allocated costs, rather than according to Ramsey principles. This probably reflects the difficulties inherent in calculating Ramsey prices in practice, and the fact that it is easier to justify the charging structure to users if it can be related to costs. Moreover, cost-based pricing is supported by the International Civil Aviation Organisation. The Commission has examined whether the use of cost-based pricing mechanisms by the subject airports results in pricing structures for airfield activities that offer a practical approximation to Ramsey prices.

91. The airports work out their total costs of airfield activities, and then allocate the corresponding revenue requirements across users according to a series of cost drivers. The resulting landing charges are computed largely based on the weight (MCTOW) of each aircraft, with the cost per MCTOW increasing through weight classes. The structure of landing charges appear, in some respects, to roughly approximate Ramsey requirements. However, there appears to be no attempt to integrate information about demand elasticities into price-setting, and Ramsey prices are sensitive to variations in demand price elasticities. As a result, it is questionable whether the pricing schedules would come as close as would be desirable to that required by Ramsey pricing. However, given the difficulty of estimating the demand elasticities directly, it may be an option to take airport cost-based pricing approaches as a proxy for Ramsey prices.

92. The Commission notes that the process of trying to identify the "causes" of costs, and to allocate the costs accordingly is a somewhat meaningless exercise, as most of the costs of airfield activities do not vary with the number of landings, but are fixed and, in many cases, sunk. There are a large number of assumptions that have to be made in order to allocate costs. Economically, the focus has to be on recouping the costs in a way that does least damage to allocative efficiency. The cost allocation methodologies are only useful to the extent that they generate Ramsey-compliant pricing structures.

93. Potentially efficient price discrimination can be practiced by airports in terms of aircraft type and by time of day. However, international agreements prohibit an airport charging a foreign airline more than a New Zealand airline (to land the same aircraft at the same time), although the reverse is not true. This limits the extent of compliance with Ramsey prices.

Cross Subsidisation

94. As airports are multi-product businesses, and serve a variety of customers, there is potential for cross-subsidisation to occur. Broadly speaking, a cross-subsidy arises where one user or group of users or service subsidises another, so that the latter does not bear all of the cost of its supply. From an economic efficiency perspective, a cross-subsidy is paid if the incremental revenues associated with an activity are below the incremental costs or above the stand-alone costs of providing that activity.

95. As the airfield activities of the three airports have been found to be subject to lessened competition, there may be scope for any excessive profits earned in that activity to be used to subsidise other activities in which the airport faces more competition. Alternatively, as evidenced from overseas, airfield activities may be subsidised from an airport's earnings in non-airfield activities. The Commission considers it desirable

to ensure that the correct costs are attributed to airfield activities, and the revenues attributed to airfield activities cover the costs of airfield activities.

96. Cross-subsidisation between airport activities is often discussed in the context of "single", "dual" or "multiple tills". Debate over the number of tills raises considerations that go beyond the scope of the Commission's inquiry. However, the scope for cross-subsidisation is potentially minimised or eliminated by the use of a dual or multiple till approach, especially where that is reinforced by a ring-fencing framework (for example, segment financial reporting) as is the case in New Zealand currently. Generally, the Commission acknowledges the advantages of using a multi-till approach to determining landing charges.

97. A review by the Commission of the airports' pricing models and cost allocations has not identified any issues with cross-subsidisation at this time.

EXCESS RETURNS

98. The Commission has attempted to estimate the distributional effects of any excess returns on airfield activities that AIAL, WIAL and CIAL may have earned historically, are earning currently, or which they may potentially earn in the future. The results of the analysis are part of the evidence considered in reaching a view as to whether section 52(b) is met—whether control of airfield activities is necessary or desirable in the interests of acquirers. The analysis of excess returns is contained in chapter 10.

99. Airports should be able, on average over time, to earn a normal return on the optimised assets used in providing the services of airfield activities. An actual return in excess of the appropriate target WACC over time would suggest that the entity was earning an excessive or monopoly return, unless those returns reflect superior performance.

Historical Excess Returns

100. The Commission has conducted an analysis of the historical returns of the airfield activities of the three airport companies over the period since corporatisation, which involved adjusting the asset base and comparing actual with Commission determined target (WACC) returns. The Commission's preliminary views on the relevant asset bases of the airports (chapter 7) and on their respective WACCs (chapter 8) are used in the analysis.

101. The actual rates of return earned by the airports on airfield activities are measured by the accounting rate of profit (ARP). The ARP is specifically designed to produce a figure that is conceptually comparable to nominal, after-tax WACC.

102. The Commission's estimation of the average historical returns earned by AIAL, WIAL and CIAL in respect of their airfield activities (relative to target) are as shown in the following table:

	Actual Returns	Target Returns	Excess Returns
AIAL 1989-2000	13.47%	9.76%	3.71%

	Actual Returns	Target Returns	Excess Returns
WIAL 1991-2000	6.54%	8.15%	0
CIAL 1989-2000	11.65%	9.64%	2.01%

103. The Commission's preliminary view is that both AIAL and CIAL have earned annual returns that have exceeded target returns on average over the 12 year period since corporatisation. The excess returns for AIAL on average were 3.71%, and for CIAL were 2.01%. In contrast, over the 10 year period since corporatisation, WIAL has not, on average, achieved what the Commission considers would be the appropriate target return (WACC). On face value, these findings suggest the preliminary conclusion that both AIAL and CIAL have used their market power in airfield activities by raising prices above the competitive level in a sustained fashion.

2000 Year Excess Returns

104. Averaged annual historical data are useful for evaluating the pricing behaviour of airports in the past, but the returns fluctuate considerably from year-to-year over the period, and may be a poor indicator of present and future behaviour (although the presence of excess returns reveals an ability and willingness to set prices above the competitive level in the case of two of the airports). The Commission has examined the results of each airport's 2000 financial year in more detail. It has endeavoured to quantify the potential excess returns and inefficiencies implied by prices for airfield activities at each airport in their 2000 financial year.

105. The Commission has chosen the year 2000 as a base year for introducing the models which will be used for calculating the efficiency effects of pricing in that year. The year 2000 also provides a base year from which to project future excess returns and inefficiencies. These future projections are discussed in a separate section below.

106. Average prices for the airports' 2000 years were computed by dividing total landing charge revenue by tonnes landed. Using the asset base and WACC determined by the Commission, and making adjustments for any unrealised capital gains or losses and taxation, a benchmark competitive price was determined. The resulting competitive prices were as shown below:

	2000 Price (P_M)	Competitive Price (P_C)	Difference, P_M-P_C
AIAL	$9.80	$9.52	$0.28
WIAL	$10.19	$15.44	-$5.24
CIAL	$ 4.63	$5.17	-$0.53

107. Excess returns were found for AIAL. Their prices were found to be $0.28 above the relevant competitive price. Their resulting excess returns were $1.2 million. WIAL and CIAL had no excess returns for the 2000 year.

Potential Future Excess Returns (Given Recent Price Increases)

108. The analysis of the 2000 year only provides a snapshot of the pricing of airfield activities by the three airports at one point in time. Prices for airfield activities have been increased recently by both AIAL and CIAL, and according to the announcements of AIAL, prices will increase further over the next two years.

Assuming that costs, WACC and the asset base remain constant at 2000 year levels, the Commission extended its 2000 year analysis for AIAL and CIAL to predict the impact of the recent price increases. Because WIAL has announced no price rises and is currently pricing below a competitive level, there are no future excess returns or allocative inefficiencies anticipated. Note that the analysis of WIAL does not take into account any increases in prices that may result from WIAL's upcoming consultation. This could potentially influence the Commission's findings in the future.

109. Factoring the recent increases in prices by AIAL and CIAL, excess returns are projected for both airports over at least the next three years (the period for which prices have been set). Per annum figures are presented below.

	Excess Returns ($)
AIAL	
Year 1	3,797,395
Year 2	5,402,391
Year 3	7,087,637
WIAL	0
CIAL Years 1-	3,849,568

INEFFICIENCIES

110. The Commission has evaluated the overall economic efficiency of the airfield activities supplied by AIAL, WIAL and CIAL. This has been done on the basis of prices prior to recent increases (2000 year prices), as well as current and future prices. The results of the analysis are part of the evidence considered in reaching a view as to whether section 52(b) is met—whether control of airfield activities is necessary or desirable in the interests of acquirers. It also feeds into the net benefits analysis that is conducted in order to determine whether control is recommended. The analysis of inefficiencies in the supply of airfield activities are contained in chapter 10.

111. The Commission has considered allocative, productive and dynamic efficiencies.

Allocative Inefficiency

112. Allocative efficiency concerns the overall level of prices, and whether they are too high, resulting in excessive profits and output below the optimal level.

113. Based on its views on asset base and WACC, the Commission has been able to estimate the competitive price and level of output, which it has then used to arrive at estimates of allocative inefficiency. Allocative inefficiencies have been estimated both for 2000 year prices and for the recently increased prices of AIAL and CIAL, as shown in the following table:

	Allocative Inefficiencies ($)
AIAL	
2000	132,723
Year 1	382,925
Year 2	694,273
Year 3	536,792
WIAL	0

	Allocative Inefficiencies ($)
CIAL	
2000	0
Years 1-	359,891

114. In respect of its 2000 year, AIAL's price exceeded the relevant competitive price and resulted in allocative inefficiencies of $0.13 million. Repeating the analysis using the recently increased prices for AIAL and CIAL produced estimates of future allocative inefficiencies for both—in the first year of increases—of $0.3 million for AIAL and CIAL.

Productive Inefficiency

115. Productive efficiency requires that the cost of any given output be minimised, so that resources are not wasted.

116. The Commission considers that there is likely to be some room for improvement in the productive efficiency of the airfield activities at each of the three airports, although on present information that is impossible to quantify. For the purposes of this draft report, the Commission has adopted a figure of 1% of airfield expenses (excluding depreciation) as a measure of productive inefficiency.

	Productive Inefficiencies ($)
AIAL	131,910
WIAL	45,630
CIAL	60,660

Dynamic Inefficiency

117. Dynamic efficiency occurs where firms adopt new products and processes in a timely fashion, and continue to invest to ensure that capacity matches demand.

118. The Commission has attempted roughly to quantify the extent of any dynamic inefficiencies in the airfield activities at each of the three airports. Given that the optimised land is often used by the airport for farming purposes, it yields a return likely to be lower than in the next best alternative employment. The difference between these returns reflect the dynamic inefficiencies of investment decisions.

	Dynamic Inefficiencies ($)
AIAL	6,711,684
WIAL	0
CIAL	49,218

CONTROL NECESSARY OR DESIRABLE IN THE INTERESTS OF ACQUIRERS

119. The second requirement of section 52 (in section 52(b)) is that control must be necessary or desirable (whether directly or indirectly) or persons supplying the goods or services. In this inquiry, the Commission considers the relevant interests to be examined are those of acquirers of airfield activities. The Commission has approached this question by assessing whether the imposition of control would

improve the economic welfare of acquirers of airfield activities—both the interests of aircraft operators (as direct acquirers), as well as the interests of ultimate consumers, aircraft passengers and those using air freight services (as indirect acquirers). This has involved an analysis of the potential benefits and detriments to acquirers arising from control, relative to the current (and projected future) market situation (the counterfactual), which includes the current regulatory regime.

120. In assessing whether the economic welfare of acquirers would be improved by control, the Commission has assessed the consequences of any state of "limited" competition in the aircraft movement market in the counterfactual. Consequences of a lack of competition can manifest themselves in various ways, including allocative, productive and dynamic inefficiencies, and inferior product quality. Lack of competition can also lead to suppliers earning excessive returns. These may be reduced by control.

121. The Commission has balanced the likely benefits of control to acquirers against the likely costs of control that would be borne by acquirers. Full discussion on the Commission's consideration of whether section 52(b) is satisfied is contained in chapter 13 of this report.

Benefits of Control for Acquirers

122. Acquirers could only be said to benefit from price control of airfield activities if they as a group were to be made better off, relative to their position in the counterfactual, after allowing for any off-setting costs that they would bear as a result of price control being introduced. Transfers of wealth between suppliers and acquirers are relevant, even though such transfers are treated as mutually off-setting and, therefore, are of no concern from an efficiency perspective.

123. The sources of potential benefit of control for acquirers are:

- Excess returns (if present) would be reduced or eliminated by price control, through lower prices being set, which would lead to a transfer of wealth to acquirers.

- Lower prices would reduce or eliminate allocative inefficiency, further enhancing the benefit to acquirers (in respect of the consumer surplus). There may also be indirect or spill-over benefits from lower prices.

- Productive inefficiency (if present) would be reduced or eliminated by price control, with the resulting cost savings likely to be passed on in still lower prices, to the benefit of acquirers.

- Dynamic inefficiency (if present) would be reduced or eliminated by price control, with the resulting lower required revenue from landing charges (to cover costs) likely to lead to still lower prices, to the benefit of acquirers.

124. As an initial starting point, the Commission assumed that all inefficiencies and excess returns identified in the counterfactual could be removed by control, and that acquirers would require all of the benefits other than those associated with producer

surplus. The total potential benefits to acquirers of price control are relatively large in the case of AIAL, and are much smaller at WIAL and CIAL.

	AIAL	WIAL	CIAL
Benefits			
Reduced excess returns and reduced allocative inefficiency (consumer surplus to acquirers)	$4,717,055	$0	$3,893,881
Reduced productive inefficiency	$131,910	$45,630	$60,660
Reduced dynamic inefficiency	$6,711,684	$0	$49,218
Total Benefits	**$11,260,649**	**$45,630**	**$4,003,759**

125. However, price control provides an imperfect substitute for competition for dealing with the inefficiencies and excessive returns in markets. The imperfect nature of price control is reflected in the costs of price control.

Costs of Control for Acquirers

126. In assessing the potential benefit to those who acquire airfield activities, the costs of price control that fall upon those acquirers must be netted off from the benefits assessed above. It is the net benefits of price control to acquirers that are relevant under section 52(b) of the Commerce Act. Hence, the concern is only with those costs of control that may be borne directly or indirectly by acquirers and those that are additional to the present situation. This in turn depends upon who pays the direct costs of the control regime, and on the nature of the regime itself.

127. The Commission is of the view that while acquirers are likely to receive most of the benefits of price control, they could indirectly pay most of the costs. The direct costs of control under the Commerce Act are likely to be greater than those of the current regulatory regime. In addition, there are indirect costs of control associated with the inefficiencies that control creates. Price control cannot be relied upon to eliminate the entirety of any inefficiencies and transfer effects found to be present in airfield activities at the three airports.

128. The total costs of control (direct and indirect) to acquirers are estimated in the following table:

	AIAL	WIAL	CIAL
Costs			
Direct costs	$1,200,000	$1,200,000	$1,200,000
Indirect costs (up to 50% of the benefits above)	$5,630,324	$22,815	$2,001,879
Total Costs	**$6,830,324**	**$1,222,815**	**$3,201,879**

129. The Commission considers the direct costs of control to be conservatively low estimates.

Is Control in the Interests of Acquirers

130. In considering whether control is "necessary or desirable...in the interests of" acquirers, the Commission attempted to measure, at each of the three airports, the benefits that acquirers would be likely to receive if airfield activities were to be subject to price control, net of the likely costs of such control that would be borne by those same acquirers (where the costs of control are those additional to those already being incurred by the present regulatory regime). Only if the benefits exceed the costs can it be determined that the interests of acquirers would be met by price control. The total benefits and total costs are an average of the 2000 year and three forecast years for AIAL. They are based on the first years' forecast figures for WIAL and CIAL.

	AIAL	WIAL	CIAL
Total Benefits	$11,260,649	$45,630	$4,003,759
Total Costs	$6,830,324	$1,222,815	$3,201,879
Net Benefits to Acquirers	**$4,430,325**	**$0**	**$801,880**

131. The Commission's preliminary view is that it is necessary or desirable in the interests of acquirers to price control the airfield activities supplied by AIAL and CIAL, but not the airfield activities supplied by WIAL. Annual net benefits for acquirers are $4.4 million for AIAL and $0.8 million for CIAL.

ARE MARKET CONDITIONS SUCH THAT CONTROL SHOULD BE IMPOSED

132. The requirements of section 52 are preconditions for a recommendation of control. In determining whether to recommend control, the Commission has had regard to the wider scheme of the Commerce Act and the objectives that the Commerce Act is intended to promote. The purpose of the Commerce Act is to "promote competition in markets for the long-term benefit of consumers within New Zealand". This purpose imports an efficiency based analysis which assesses allocative, productive and dynamic efficiencies and product quality. Although control "may" be imposed if section 52 is satisfied, the Commission has also been asked for a recommendation on whether it considers control should be imposed.

133. In the long-term, consumers benefit from the continuous improvements in the nature of products and production processes encouraged by the competitive process. Market supply is important. Measures that may benefit consumers in the short-term—such as price cuts—may ultimately be harmful if they unduly suppress dynamic efficiency, thereby reducing benefits in the future. All production ultimately benefits consumers, but consumers benefit most when production is efficient.

134. The Commission considers the object of the control provisions is to address circumstances where markets, due to a lack of competition, are not delivering efficient outcomes for consumers. The Commission considers that any recommendation as to whether control should be imposed should be based on efficiency grounds and an assessment of the likely benefit to consumers within New Zealand. This is done by conducting a "public benefit" (also referred to as a "net benefits") test. Such an approach is consistent with the Commission's approach to determining applications for an authorisation under sections 58 and 67 of the Act, where the Commission

measures the benefits and detriments of a proposed merger or acquisition against a counterfactual.

135. The focus is on the interests of the economy as a whole. The aim is to maximise economic efficiency regardless of which particular individuals receive the benefits. Wealth transfers between different groups within the economy (due to, for example, the elimination of excess returns) do not form part of this analysis.

136. Full discussion on whether the Commission considers that market conditions are such that the Minister should recommend that the airfield activities supplied by AIAL, WIAL and/or CIAL be controlled is contained in chapter 14 of this report.

Net Efficiency Benefits

137. The full efficiency benefits (including producer surplus) are included in the analysis of net benefits, but excess returns are excluded. The total benefits and total costs are an average of the 2000 year and three forecast years for AIAL. They are based on the first years' forecast figures for WIAL and CIAL. These, together with costs are shown below:

	AIAL	WIAL	CIAL
Benefits			
Reduced allocative inefficiency.	$436,678	$0	$359,891
Reduced productive inefficiency	$131,910	$45,630	$60,660
Reduced dynamic inefficiency	$6,711,684	$0	$49,218
Total Benefits	*$7,280,272*	*$45,630*	*$469,769*
Costs			
Direct costs	$1,200,000	$1,200,000	$1,200,000
Indirect costs (up to 50% of the benefits above)	$3,640,136	$22,815	$234,884
Total Costs	*$4,840,136*	*$1,222,815*	*$1,434,884*
Net Benefits	**$2,440,135**	**$0**	**$0**

138. There appear to be potential net benefits of $2.4 million per annum if the airfield activities supplied by AIAL were to be subject to price control. However, there appear to be no net efficiency gains resulting from the imposition of price control over the airfield activities supplied by CIAL or WIAL.

139. The Commission notes that these outcomes are unlikely to change, either if a lower estimate of the indirect costs of control were to be used; or if the further efficiency gain from the reduced spill-over effect of monopoly pricing in the aircraft movement market to other markets were introduced. The outcome for CIAL is the most sensitive to these qualifications, although it seems unlikely that the outcome at CIAL would change.

Conclusion on Control

140. Based on its net benefits analysis, the Commission's preliminary view is to incline towards recommending control in the case of AIAL. There are likely net benefits in controlling the airfield activities supplied by AIAL. There appear to be no net

benefits in respect of the airfield activities supplied by WIAL and CIAL. However, as noted above, the analysis does not factor in any future increases in charges that may come out of WIAL's upcoming consultation.

DRAFT RECOMMENDATION

141. If the Commission were to report to the Minister today, its recommendation would be that:

- The requirement in section 52(a) of the Commerce Act is satisfied for all three airports. There is evidence that airfield activities (as defined in the Airport Authorities Amendment Act 1997) provided by AIAL, WIAL and CIAL are supplied or acquired in a market in which competition is limited or is likely to be lessened.

- The requirement in section 52(b) of the Commerce Act is satisfied for two airports. There is evidence that it is necessary or desirable for the prices of the airfield activities supplied by AIAL and CIAL to be controlled in accordance with the Commerce Act in the interests of the acquirers of airfield activities.

- Based on an assessment of the net efficiency benefits. the Commission's preliminary view is that market conditions are such that only the airfield activities supplied by AIAL should be controlled.

142. Airfield activities are not the only services supplied by AIAL, and potentially not the only services that it supplies in market(s) subject to limited competition. The Commission notes that in reaching its preliminary view to recommend control of the airfield activities supplied by AIAL, it has not considered how the control of airfield activities would impact on the other services supplied by AIAL. Other parts of AIAL's business fall outside the scope of the present inquiry.

143. The Commission's recommendation is based on an assessment of the potential benefits and costs of control under the Commerce Act. The Commission notes that the current inefficiencies may be able to be removed by a form of regulation other than price control, for example one that involves a requirement on the airports to negotiate on price and service (rather than merely to consult) subject to set pricing guidelines, a requirement to disclose information, and the existence of an external body to act as an arbitrator in disputes over the outcome of negotiations.

144. The Commission notes that, in making its draft recommendation, it has not taken account of distribution of wealth issues.

145. The impact of the outcome of this inquiry has not been included, nor has the possibility of changes to the current regulatory regime being considered by the Ministry of Transport.

COMMENT SOUGHT

146. Interested persons are invited to make submissions on this draft report and the Commission's draft recommendations. The dates on which parties are able to furnish submissions are as follows:

10 August 2001	Submissions on the draft report, and any supporting reports by independent experts interested parties may employ.
31 August 2001	Cross submissions by interested parties and their experts commenting on other submissions.
4-7, 10 & 12-14 September 2001	Conference

147. The Commission is particularly interested in responses to the questions listed below.

Section 52(a) – Competition Limited

- Is the Commission's approach to determining whether section 52(a) is met correct?
- Are the markets appropriately defined?
- Do any additional markets require consideration?
- Is the Commission's assessment of the nature and scale of current competition in the supply of airfield activities correct?
- Is the Commission's assessment of the likelihood, timing, nature and scale of potential new entry in the supply of airfield activities correct?
- Is the Commission's assessment of the degree of constraint imposed AIAL, WIAL and CIAL by the acquirers of airfield activities—in terms of the ability of acquirers to substitute for the airfield activities provided at another airport—correct?
- Is the Commission's assessment of the price elasticity of demand for airfield activities at Auckland, Wellington and Christchurch International Airports correct?
- Is the Commission's assessment of the extent to which any countervailing power of the acquirers of airfield activities constrains AIAL, WIAL and CIAL—the ability of acquirers to exercise countervailing power correct?
- Is the Commission's assessment of the ability of current or potential competition to constrain AIAL, WIAL and CIAL correct?
- Is the Commission's view that the airfield activities supplied by AIAL, WIAL and CIAL are supplied in markets in which competition is limited correct?

Pricing

Pricing Principles

- Are the pricing principles considered by the Commission appropriate?

Asset Base

- Is it correct to value airfield land at opportunity cost?
- How the opportunity cost of airfield land should be determined?
- Should the costs of land include the costs associated with getting the land into airport use?
- Is it correct to value specialised airfield assets at depreciated historic cost?
- Is the extent of (and reasons for the) optimisation undertaken by the Commission in determining asset base appropriate?
- Are the Commission's views on when new investment should be included in the asset base appropriate?
- Are the asset values determined for the airfield activities of AIAL, WIAL and CIAL appropriate?

WACC

- Is the appropriate debt premium adopted by Commission?
- Is the appropriate risk-free rate adopted by the Commission?
- Is the appropriate asset beta adopted by the Commission?
- Are the comparators for the airfield activities supplied by AIAL, WIAL and CIAL used by the Commission in order to estimate asset beta appropriate?
- Should CIAL's asset beta be greater than AIAL's, given the different exposure to domestic demand?
- Is the market risk premium adopted by the Commission appropriate?
- Is the leverage ratio adopted by the Commission appropriate?
- Are the WACC estimates developed by the Commission appropriate?

Airfield Pricing

- Is the Commission's assessment of the allocative efficiency of the structure of the landing charges of AIAL, WIAL and CIAL correct?

- Is the Commission's assessment of the airports' approaches to cost allocation correct?

- Is the Commission's assessment of the extent of compliance with Ramsey pricing correct?

- Is the Commission's assessment of whether there is any evidence of cross-subsidisation associated with the supply of airfield activities at Auckland, Wellington and Christchurch International Airports correct?

Performance Analysis

- Is the Commission's assessment of the existence of, or potential for, excess returns correct?

- Is the Commission's assessment of the extent of, or potential for, allocative efficiency or inefficiency correct?

- Is the Commission's assessment of the extent of, or potential for, productive efficiency or inefficiency correct?

- Is the Commission's assessment of the extent of, or potential for, dynamic efficiency or inefficiency correct?

- To what extent are there other sources of detriment (e.g. spillover effects, service quality)?

Section 52(b) – Control Necessary or Desirable in the Interests of Acquirers

- Is the Commission's approach to determining whether section 52(b) is met correct?

- Is the Commission's assessment of the extent to which excess returns, allocative, productive, and/or dynamic efficiency could be improved as a result of airfield activities being controlled correct?

- Is the Commission's formulation of the likely counterfactual should airfield activities not be controlled, and the various features of that counterfactual, appropriate?

- Is the Commission's assessment of the benefits to acquirers from airfield activities being controlled, relative to the likely counterfactual correct?

- Is the Commission's assessment of the additional costs of control under the Commerce Act, compared to the status quo correct?

- Is the Commission's assessment of the costs of control that acquirers are likely to bear correct?

- Is the Commission's preliminary view that the airfield activities supplied by AIAL and CIAL satisfy section 52(b)—that it is necessary or desirable in the interests of acquirers to control the airfield activities supplied by AIAL and CIAL—correct?

Discretion to Control

- Is the Commission's analysis of net efficiency benefits appropriate?

- Is the Commission's assessment of the public benefits to be gained from airfield activities being controlled, relative to the likely counterfactual correct?

- Is the Commission's assessment of the lessons that can be learned from the experiences of airport regulation internationally correct?

- Is the Commission's preliminary view that the airfield activities supplied by AIAL should be controlled correct?

- Is the Commission's preliminary view that the airfield activities supplied by WIAL and CIAL should not be controlled correct?

General Comments

- The Commission invites comments on any of the matters raised in the draft report, and any other relevant points.

- The Commission invites comments on any omissions, or material or factual inaccuracies in the draft report.

1. INTRODUCTION

NOTICE FROM THE MINISTER

1.1. Section 53 of the Commerce Act 1986 (the Commerce Act) allows the Governor-General, by Order in Council, on the recommendation of the Minister of Commerce (the Minister) to declare that specified goods or services be controlled.

1.2. Section 56 allows the Commission to report to the Minister on whether or not an Order in Council under section 53 should be made. The Commission may report on its own initiative or following a request from the Minister. Where the Minister makes a request, it must be in writing and must specify the date by which the Commission must report.

1.3. Under section 54, the Minister may require the Commission to advise on thresholds that would assist in assessing whether goods or services should be controlled.

The Notice

1.4. Acting pursuant to the then section 54(1) of the Commerce Act, the Minister, in a letter of 26 May 1998[1], requested the Commission to report to him as follows:

> A whether there is evidence that airfield activities {as defined in the Airport Authorities Amendment Act 1997} provided by the three major international airports (Auckland, Wellington and Christchurch) are supplied or acquired in a market in which competition is limited or is likely to be lessened; and it {is} necessary or desirable for the prices of these goods or services to be controlled in accordance with the {Commerce} Act in the interests of users, or consumers, or as the case may be, suppliers; and
>
> B whether market conditions are such that the Commission believes that {the Minister} should recommend to the Governor-General that he make an Order in Council under section 53 of the {Commerce} Act invoking price controls over charges for airfield activities at the three major international airports.
>
> Specific matters on which I require the Commission to consider and report to me on are:
>
> 1. Whether {price control over} charges should be introduced for airfield activities at one or more of the three major international airports.
>
> 2. If the Commission is of the view that price control should be introduced, to which (i) regions, areas, or localities in New Zealand; (ii) quantities, qualities, grades, or classes; and (iii) different persons or classes of persons, should price control be applied?
>
> 3. What conditions, tests, or thresholds does the Commission consider would be useful in judging whether (i) airfield activities are or will be supplied in a market in which competition is limited or likely to be lessened; and (ii) it is necessary or desirable for the prices of airfield activities to be controlled in accordance with the {Commerce} Act.
>
> If price control was introduced (i) what form of price control would the Commission apply; (ii) and why; (iii) how would the Commission operate this form of price control; and (iv) what time and/or in what conditions should price control end?

---

[1] Appendix 1 comprises the Minister's letter to the Commission of 27 March 1998; the Commission's letter to the Minister of 5 May 1998; and the Minister's letter to the Commission of 26 May 1998.

1.5. Since receiving the section 54 Notice dated 26 May 1998, the Commerce Act has been amended by the Commerce Amendment Act 2001 (the Amendment Act). The Amendment Act repealed Parts IV and sections 70-74 to Part V of the Commerce Act.

1.6. Although the Notice was issued under the old provisions of Part IV of the Commerce Act, the Commission, in making its recommendations to the Minister, intends to consider the new Part 4 and new sections 70-74, as amended on the basis that the Minister has to consider, and make a decision based on, the Commission's report under the amended provisions of the Act. The limiting of Part 4 to control of prices is removed and the Commission can now control prices, revenues and quality standards. As a result, while the Notice refers only to price control, the Commission intends to make recommendations in respect of the control of prices, revenues and quality standards for the airfield activities at Auckland, Wellington and Christchurch International Airports; and the nature and extent of any control measures.

Goods and Services Covered by the Notice

1.7. "Airfield activities" are defined in the Airport Authorities Amendment Act as follows:

> Airfield Activities means activities undertaken (including the facilities and services provided) to enable the landing and take-off of aircraft; and includes-
>
> (a) The provision of any or more of the following:
> (i) Airfields, runways, taxiways, and parking aprons for aircraft;
> (ii) Facilities and services for air traffic and parking apron control;
> (iii) Airfield and associated lighting;
> (iv) Services to maintain and repair airfields, runways, taxiways, and parking aprons for aircraft;
> (v) Rescue, fire, safety and environmental hazard control services;
> (vi) Airfield supervisory and security services; and
>
> (b) The holding of any facilities and assets (including land) acquired or held to provide airfield activities in the future (whether or not used for any other purpose in the meantime).

1.8. Airfield activities are not the only activities undertaken by AIAL, WIAL and CIAL. The Minister has made the following comment in this regard:

> …the Commerce Commission will not be able to ignore the other areas of the airport outside the scope of "airfield activities". This is because to thoroughly examine airfield activities the Commerce Commission will need to assess such factors as allocation of assets, revenues, and costs between airfield activities and other areas of the airport.[2]

1.9. The Commission shares the Minister's view. The integrated nature of airport activities has made it necessary for the Commission to gain an understanding of, and consider, the impact of other airport activities. The Commission, therefore, has considered airfield activities in the context of all airport activities. In this report, the Commission confines its recommendations to airfield activities.

[2] Minister's letter to Air New Zealand of 4 February 1999.

INQUIRY PROCEDURE

1.10. This is the first occasion on which the Commission has conducted an inquiry with a view to making recommendations to the Minister under section 56 (or the former section 54(1)) of the Commerce Act. This part of the report describes the procedures the Commission has adopted in conducting this inquiry.

1.11. In considering its report to the Minister the Commission is required by section 57 to give interested parties a reasonable opportunity to give their views, and must also have regard to those views.

Development of Process and Procedures

1.12. On 4 June 1998 the Commission issued a paper entitled "Process and Preliminary Issues" (ref: A98/1). This set out its proposed process, preliminary issues, and a suggested timetable, among other things. It proposed that the inquiry be divided into two phases, a preliminary phase in which Commission staff and interested parties appraised themselves of the relevant issues, and a formal phase (in which it proposed adopting the procedures used for determining authorisation applications under Part 5 of the Commerce Act).

1.13. The paper invited submissions and eight were received. The main comments related to the limited scope of the inquiry and the compressed timetable for the formal phase.[3]

1.14. After considering those submissions, the Commission confirmed its approach would be to divide the inquiry into preliminary and formal phases, and to adopt the procedure used for determining authorisation applications under Part 5 of the Commerce Act. The Commission also extended the time allocated for the formal consultation phase from 60 to 80 working days.

1.15. On 3 August 1998 the Commission published an Information Paper (ref: A98/2) explaining the outcome of the "Process and Preliminary Issues" consultation, and setting out the timetable for the formal consultation phase of the inquiry.

1.16. On 13 August 1998 the Commission published in the *New Zealand Gazette* a notice advising that it had received a request for a report from the Minister and stating how interested persons could obtain more information and furnish their views.

1.17. The Commission also established a Register of Interested Parties. All persons who indicated an interest in the inquiry were included.[4]

---

[3] A list of the parties making submissions on process and preliminary issues is provided in appendix 2.

[4] Appendix 3 contains the Register of Interested Parties.

Preliminary Phase

1.18. During the preliminary phase of the inquiry the Commission undertook work to identify the issues likely to be relevant, and to examine the experience of other countries which had introduced price control for public utilities, particularly airports. The work included gathering information on the structure of the industry in New Zealand, how landing and other charges were determined, and the regulatory regime applying to airports. Information was sought from a number of interested persons. The parties which were visited by Commission staff, and from whom information was sought, are listed in appendix 4.

1.19. On 2 July 1999 the Commission issued a Critical Issues Paper (ref: A99/1) in which it outlined the likely key issues in the inquiry, and sought information and analysis. The paper stated that there may be other issues to be considered, and that the paper was not intended to preclude submissions on any other issues.

1.20. On 29 July 1999 the Minister required the Commission to extend the reporting date for the inquiry to 1 August 2002.[5] An amended notice was published in the *New Zealand Gazette*, extending the reporting date accordingly. The extended timetable allowed:

- The airports to complete the consultation with substantial customers required by the Airport Authorities Amendment Act 1997.
- Parties the opportunity to consider disclosures made by the airports in 2000 pursuant to the Airport Authorities (Airport Companies Information Disclosure) Regulations 1999.
- The Government further time to update the price control provisions of the Commerce Act.

1.21. On 6 August 1999, the Commission published a Proposed Timetable for Progressing the Inquiry (ref: A99/2) and sought submissions from interested parties by 18 August 1999. Eleven submissions were received.[6] Having considered these submissions, the Commission published a Revised Timetable (ref: A99/3) on 2 September 1999. Subsequently, the Commission made a few minor modifications to the timetable. And, in December 2000, the Commission delayed the commencement of the formal consultation phase of its inquiry for 3 months.

Formal Phase

1.22. A revised and updated Critical Issues Paper (ref: A01/1) was issued on 16 March 2001 and marked the commencement of the formal phase of the Commission's inquiry. Five submissions were received in response to the paper. A list of the parties who made the submissions is contained in appendix 7.

---

[5] Appendix 5 contains the Minister's letter to the Commission dated 29 July 1999, requiring the Commission to extend the reporting date.

[6] A list of parties making submissions on the revised timetable is provided in appendix 6.

1.23. The timetable for the remainder of the formal phase of the Commission's inquiry (following the release of this draft report) is as follows:

10 August 2001	Submissions on draft report & experts' reports due
31 August 2001	Cross submissions due
4-7, 10 & 12-14 September 2001	Conference
2 November 2001	Planned completion of the Commission's report

CONFIDENTIALITY

1.24. Some of the information obtained by the Commission during both the preliminary and formal phases of the inquiry is confidential. Confidential information can be protected by the Commission making an order under section 100 of the Commerce Act. Information not the subject of section 100 orders may be able to be withheld under the Official Information Act 1982.

1.25. The Commission needs to test information to the maximum extent possible. In order to test information, the Commission will take the following approach:

- Attempt to convey the thrust of the information in publicly available material, but without disclosing confidential details.

- Where necessary, releasing confidential material under the Official Information Act on public interest grounds.

- Disclose confidential information to independent experts employed by the Commission and/or experts employed by interested parties, in the interests of testing the information, with written confidentiality undertakings from those experts to ensure that there is no further disclosure by them.

1.26. Under the Commerce Act any section 100 orders expire at the conclusion of the inquiry. From that point the Official Information Act 1982 applies in respect of disclosure of information.

2. CONTROL OF GOODS AND SERVICES UNDER THE COMMERCE ACT

INTRODUCTION

2.1. The Commerce Act is an Act to promote competition in markets for the long-term benefit of consumers within New Zealand.[7] In serving this purpose it restricts certain anti-competitive trade practices (Part 1), prohibits certain business mergers and acquisitions (Part 3), provides for the imposition of control over the supply of goods or services when certain conditions are met (Part 4), and provides for the authorisation of restrictive trade practices, the supply of controlled goods or services, and the authorisation or clearance of business acquisitions (Part 5).

2.2. In enacting the control of goods and services provisions in the Commerce Act, Parliament recognised, that for various reasons, a market can fail to deliver competitive outcomes, and that it is not always possible for markets to operate efficiently. The Privy Council discussed the underlying purpose of the Commerce Act's control provisions, and where they fit with regard to the application of the Act, in *Telecom Corporation of New Zealand Ltd v Clear Communications Ltd*[8] (*emphasis added*):

> Monopolies act to the detriment of the consumer by permitting the monopolist to charge higher prices than would be the case if there were a fully competitive market. This problem can be tackled in one or other or both of two ways, viz by a regulatory body artificially restricting the price chargeable or by introducing efficient competition. The introduction of efficient competition (by such anti-trust legislation as s 36) does not in itself instantly remove the evils of the monopolist's overcharging: it produces the conditions which, by market forces, eventually force the monopolist to operate efficiently (and therefore more cheaply) and to abandon policies of excessive charging. *Such legislation is neither effective nor apt to take the place of a regulatory proceeding which, after detailed investigation of the efficiency of the monopoly system, can set a maximum price for goods or services to be supplied having regard to economies that could be affected and a reasonable rate of return*. The Commerce Act, inter alia, directed itself to both these processes: s 36 is designed to produce the competition which will, it is hoped, in due course compete out monopoly rents; Part IV of the Act enables immediate price restriction to be imposed by regulation.

2.3. The Commission has had no recent experience of control, and presently there are no goods or services controlled under the Commerce Act. In the late 1980's and early 1990's the Commission did have some experience in applying the (then) Part V price control provisions in regard to the authorisation of prices for the supply of natural gas, flour, wheat, and milk.[9] These decisions all involved the authorisation of prices for goods that had previously been declared as controlled under the Commerce Act 1975.

2.4. The Commission to date has not completed any reports, or made any recommendations, as to whether control should be imposed under Part 4 of the Commerce Act.

---

[7] Long title of the Commerce Act 1986.

[8] (1994) 6 TCLR 138, 160.

[9] Refer Commerce Commission website for copies of these decisions—www.comcom.govt.nz/price.

SCHEME OF THE CONTROL PROVISIONS—PART 4

2.5. The control provisions, as detailed in Part 4 of the Commerce Act, provide for the imposition of control over the supply of goods and services by Order in Council.

2.6. The Commission, of its own initiative, or following a request from the Minister (section 56(3)), may report (to the Minister) on whether it considers that goods or services should be controlled (section 56(1)). In considering such a report the Commission may have regard to all matters it considers necessary or desirable (section 56(2)).

2.7. The Governor-General may make an Order imposing control over the supply of goods or services only on the recommendation of the Minister (section 53(2)). The Minister may only make such a recommendation if satisfied (section 53(3)), that the goods or services are, or will be, supplied or acquired, in a market in which competition is limited or is likely to be lessened (section 52(a)), and that it is necessary or desirable to impose control in the interests of either persons acquiring the goods or services (section 52(b)(i)) or, in the interests of suppliers of the goods or services (section 52(b)(ii)).

2.8. The Minister may also request that the Commission advise on thresholds that it considers would assist in assessing whether the requirements under section 52 are satisfied (section 54).

2.9. Goods or services subject to control may be identified by a description of the goods and services, or by a description of the kind or class to which the goods or services belong (section 57A(1)). The control may apply to goods or services supplied in or for delivery within specified regions, areas, or localities in New Zealand; supplied in different quantities, qualities, grades, or classes; or, supplied by or to or for the use of different persons or classes of persons (section 57A(2)).

2.10. "Controlled" goods or services cannot be supplied unless an authorisation (or an undertaking) has come into effect in respect of the supply of those goods and services, and the goods or services are supplied in compliance with the authorisation (or undertaking) (section 55). The Commission is the body charged with making such authorisations (sections 70 and 71), or accepting such undertakings (section 72).

THE FORM OF CONTROL—PART 5

2.11. Part 5 of the Act provides for the actual controls that can be imposed. Section 70(1) empowers the Commission to make an authorisation in respect of all or any component of the prices, revenues, or quality standards that apply in respect of the supply of the controlled goods or services, using whatever approach it considers appropriate. In exercising this power, the Commission is required to have regard to the extent to which competition is limited or is likely to be lessened in respect of the controlled goods or services; the necessity or desirability of safeguarding the interests of persons who acquire or supply the controlled goods or services; and, the promotion of efficiency in the production and supply or acquisition of the controlled goods or services (section 70A).

THE COMMISSION'S APPROACH IN THIS INQUIRY

2.12. The Commission initiated its inquiry into airfield activities in response to a request from the Minister of Commerce dated 26 May 1998. The Minister, acting pursuant to (the then) section 54 of the Commerce Act, required that the Commission report to him on a number of matters concerning price control and the supply of airfield activities by AIAL, WIAL and CIAL. This chapter of the report sets out the Commission's approach in answering the Minister's Notice, and directs readers to the chapters in this report containing analysis of the issues.

SECTION 52—MAY CONTROL BE IMPOSED?

2.13. Paragraph A of the Notice requires the Commission to report on the following:

> A whether there is evidence that airfield activities {as defined in the Airport Authorities Amendment Act 1997} provided by the three major international airports (Auckland, Wellington and Christchurch) are supplied or acquired in a market in which competition is limited or is likely to be lessened; and it {is} necessary or desirable for the prices of these goods or services to be controlled in accordance with the {Commerce} Act in the interests of users, or consumers, or as the case may be, suppliers; and

2.14. This paragraph mirrors section 52 of the Commerce Act. The Minister must be satisfied that the requirements of section 52 are met before he or she may recommend control of any goods or services.

2.15. Paragraph 3 of the Minister's request specifically asks:

> 3. What conditions, tests, or thresholds does the Commission consider would be useful in judging whether (i) airfield activities are or will be supplied in a market in which competition is limited or likely to be lessened; and (ii) it is necessary or desirable for the prices of airfield activities to be controlled in accordance with the {Commerce} Act.

2.16. Section 52 of the Act states:

> 52 When control can be imposed
> Goods or services may be controlled if-
> (a) The goods or services are, or will be, supplied or acquired in a market in which competition is limited or is likely to be lessened; and
> (b) It is necessary or desirable for those goods or services to be controlled either-
> (i) In the interests of persons acquiring the goods or services (whether directly or indirectly), if the goods or services are acquired from a person who faces limited or lessened competition for the supply of those goods or services; or
> (ii) In the interests of suppliers, where the goods or services are supplied to a person who faces limited or lessened competition for the acquisition of those goods or services.

2.17. The Minister has therefore expressly requested the Commission to report on whether it considers there is evidence that the requirements under section 52 are met in relation to airfield activities at the three relevant airports. The Minister has also asked for advice on thresholds the Commission considers useful in determining that question. The Commission addresses each of the three requirements as follows.

Competition is "Limited or is Likely to be Lessened"

2.18. The first aspect of paragraph A is whether competition is "limited or is likely to be lessened" in the market for the supply of airfield activities at the three specified international airports.

Competition

2.19. 'Competition' is defined in section 3(1) of the Act to mean "workable or effective competition".[10]

2.20. Guidance as to what constitutes workable or effective competition can be found in decisions of the New Zealand courts on the question.

2.21. The High Court in *ARA v Mutual Rental Cars (Auckland Airport) Ltd*[11] and *Fisher & Paykel Ltd v Commerce Commission*[12] approved the following formulation of "workable" competition:[13]

> Workable competition means a market framework in which the pressures of other participants (or the existence of potential new entrants) *is sufficient to ensure that each participant is constrained to act efficiently* and in its planning to take account of those other participants or likely entrants as unknown quantities. To that end there must be an opportunity for each participant or new entrant to achieve an equal footing with the efficient participants in the market by having equivalent access to the means of entry, sources of supply, outlets for product, information, expertise and finance. This is not to say that particular instances of the items on that list must be available to all. That would be impossible. For example, a particular customer is not at any one time freely available to all suppliers. Workable competition exists when there is an opportunity for sufficient influences to exist in any one market which must be taken into account by each participant and which constrains its behaviour.

2.22. As to the particular elements and principles that underlie workable and effective competition the courts in New Zealand have generally appeared to approve the Australian Trade Practices Tribunal's discussion in *Re Queensland Co-operative Milling Association Ltd: Re Defiance Holdings Ltd*[14] (QCMA).

2.23. In that decision, the Australian Trade Practices Tribunal cited the United States Attorney-General's observation that "the basic characteristic of effective competition in the economic sense is that no one seller, and no group of sellers acting in concert, has the power to choose its level of profits by giving less and charging more" and that

---

[10] Ross H Patterson states that the concept of workable competition was first developed by Professor J M Clarke to contrast with what he described as the "unreal or ideal standard" of perfect competition which "does not and cannot exist and has presumably never existed"

[11] (1987) 2 TCLR 141, at 166.

[12] (1990) 2 NZLR 731, at 757.

[13] Contained in Heydon, *Trade Practices Law* Vol.1 (2nd Ed.) Sydney, Law Book Co., 1989, p 1548, paragraph 3.210.

[14] (1976) 8 ALR 481, 514-517. Refer the High Court decision in *Fisher & Paykel Ltd v CC* (1990) 2 NZLR 731, 759; (1990) 3 NZBLC 101,655, 101,680; and the Court of Appeal decision in *Tru Tone Ltd v Festival Records Retail Marketing Ltd* (1988) 2 NZLR 352; (1988) 2 TCLR 542; 2 NZBLC 103,286 (CA).

"the antithesis of competition is undue market power in the sense of the power to raise price and exclude entry".[15]

2.24. The Australian Trade Practices Tribunal in QCMA stated:

> Competition expresses itself as rivalrous market behaviour.
> …
>
> In our view effective competition requires both that prices should be flexible reflecting the forces of demand and supply and that there should be independent rivalry in all dimensions of the price-product-service packages offered to consumers and customers.
>
> Competition is a process rather than a situation. Nevertheless, whether firms compete is very much a matter of the structure of the markets in which they operate. The elements of market structure which we would stress as needing to be scanned in any case are these:-
>
> (1) the number and size distribution of independent sellers, especially the degree of market concentration;
>
> (2) the height of barriers to entry, that is the ease with which new firms may enter and secure a viable market;
>
> (3) the extent to which the products of the industry are characterised by extreme product differentiation and sales promotion;
>
> (4) the character of 'vertical relationships' with customers and with suppliers and the extent of vertical integration; and
>
> (5) the nature of any formal, stable and fundamental arrangements between firms which restrict their ability to function as independent entities.

2.25. The New Zealand Court of Appeal in *Telecom Corporation of New Zealand Limited v Commerce Commission* [1992] 3 NZLR 429 at 444 confirms the need to give weight to both structure and behaviour when examining a market environment, and confirms that the weighting ,must vary according to the particular facts. Richardson J stated:

> …structures only function through people and at the end of the day it is how participants in the market behave that counts.

2.26. The Court of Appeal endorsed the approach of the Commission of the European Community in *re Continential Can Co Ltd* [1972] CMLR D11, and said:

> That approach reflects the concern for how firms behaves and eschews a total preoccupation with structure.

2.27. The five elements from *QCMA* were used as the basis for analysing competition in the relevant market both before the High Court and the Court of Appeal by counsel in *Tru Tone Ltd v Festival Records Retail Marketing Ltd*. Counsel also referred to a sixth element—"behaviour in the market". This basis of analysis was implicitly accepted by both Courts.[16]

---

[15] Report of the National Committee to Study the Anti-Trust Laws (1955).

[16] High Court *Tru Tone Ltd v Festival Records Retail Marketing Ltd* (1988) 2 TCLR 525, Court of Appeal *Tru Tone Ltd v Festival Records Retail Marketing Ltd* (1988) 2 TCLR 542

2.28. In discussing this analysis the Court of Appeal stated: [17]

> The first five are the elements of market structure emphasised in the assessment of the competition process in *Re Queensland Co-operative Milling Association Ltd* (1976) 25 FLR 169, 189 and in such New Zealand cases as *Re Application by Visionhire Holdings Ltd* (1984) 4 NZAR 288. The sixth, behaviour in the market, reflects the reality that constraints on the operation of firms are a key indicator of market power.

2.29. The Commission considers that any assessment of as to the state of competition in a market requires the Commission to take into account the structural elements of the market, as well as any relevant behavioural considerations.

Limited or is Likely to be Lessened

2.30. The Commission must determine whether evidence demonstrates that competition in the market(s) for airfield activities supplied by AIAL, WIAL and CIAL is limited or is likely to be lessened.

2.31. The word "limited" is not defined in the Commerce Act, but denotes an aspect of restricted or impaired competition. An assessment as to whether competition is "limited' to the degree necessary is a matter of judgement in the context of the purpose of the Commerce Act.

2.32. The Commission's view is that a nominal or "de minimus" restriction or impairment of competition in a market would not be enough to satisfy the "limited" competition requirement.

2.33. The Commission interprets the phrase "likely to be lessened" as describing the situation where a future event or occurrence is anticipated to have an effect on competition in a market in which competition may not currently be "limited", but could become so following that event or occurrence.

2.34. The Commission has regard to the purpose of the Commerce Act which is to promote competition in markets (for the long-term benefit of consumers within New Zealand). The price control provisions of the Commerce Act fit within that framework and must be interpreted in the light of the objective of maintaining competitive and efficient markets.

2.35. In determining whether competition is "limited" in the relevant market(s) for airfield activities the Commission considers the structural and behavioural elements exhibited. Such an assessment includes taking into account the number of competitors in the market(s), the regulatory controls in place, the existence of any market power, the existence of any countervailing power, the existence of any collusion or other anti-competitive conduct, and an analysis of any other relevant structural and behavioural competitive constraints.

2.36. The analysis of the state of competition in the market(s) in which airfield activities are supplied by AIAL, WIAL and CIAL is conducted in chapter 5 of this report.

---

[17] (1988) 2 TCLR 542, 553.

Necessary or Desirable in the Interests of Acquirers or Suppliers

2.37. The second aspect of the Minister's paragraph A is whether there is evidence to show that control of charges for airfield activities is "necessary or desirable" in the interests of either the person's acquiring, or persons supplying, the specified goods or services. In the context of this report, the Commission concludes that the relevant interests to be examined are those of acquirers (whether directly or indirectly) of airfield activities at the three airports.

2.38. The Commission considers that the reference to direct or indirect acquirers requires an examination of the interests of aircraft operators (as direct acquirers), as well as the interests of ultimate consumers—aircraft passengers and those using air freight services (as indirect acquirers).

2.39. The term "interests" is not defined in the Commerce Act. The Commission views "interests", as used in section 52, as describing economic welfare. Consequently, the Commission is to determine whether the imposition of control would improve the economic welfare of (direct and indirect) acquirers of airfield activities.

2.40. In assessing whether the economic welfare of acquirers would be improved by control, the Commission assesses the consequences of any state of "limited" competition in the relevant markets. Consequences of a lack of competition can manifest themselves in various ways including allocative, productive and dynamic inefficiencies, and inferior product quality. Lack of competition can also lead to suppliers earning excessive returns.

2.41. The economic benefits of a competitive market generally manifest as allocative, productive, and dynamically efficient outcomes, and appropriate product quality. In addition, a competitive market would likely lead to normal profits being earned.

2.42. In determining whether the imposition of control is necessary or desirable in the interests of acquirers, the Commission undertakes an analysis of the current market situation (the counterfactual), and then considers the benefits and detriments to acquirers arising from control. This analysis is conducted in chapter 13 of this report.

Thresholds for Judging "Limited" and "Necessary or Desirable"

2.43. Pursuant to section 54 of the Commerce Act, the Minister may require the Commission to advise on thresholds that would assist the Minister in assessing whether the requirements of section 52 are met.

2.44. The Commission, in addressing question A, has given consideration to thresholds that could indicate a market subject to limited competition. However the Commission is cautious about identifying absolute thresholds, and is mindful that a decision as to the state of competition in a market can only be made after a full examination of the characteristics of competition in that market.

2.45. The Commission has also given consideration to thresholds that may assist in determining whether it is necessary or desirable to impose control in the interests of acquirers. However, the Commission notes, again, that such thresholds can only be

indicative, and not absolute determinants of whether the second requirement under section 52 is satisfied.

2.46. However, in order to respond to the Notice, the Commission has interpreted the requirements of section 52 and developed a number of practical "conditions, tests, or thresholds" which appear in the report as relevant.

IS CONTROL RECOMMENDED?

2.47. Paragraph B of the Minister's request asks the Commission to report on:

> B whether market conditions are such that the Commission believes that {the Minister} should recommend to the Governor-General that he make an Order in Council under section 53 of the {Commerce} Act invoking price controls over charges for airfield activities at the three major international airports.

2.48. Paragraph 1 specifically asks:

> 1. Whether {price control over} charges should be introduced for airfield activities at one or more of the three major international airports.

2.49. Paragraph 2 specifically asks:

> 2. If the Commission is of the view that price control should be introduced, to which (i) regions, areas, or localities in New Zealand; (ii) quantities, qualities, grades, or classes; and (iii) different persons or classes of persons, should price control be applied?

2.50. The Governor-General can impose control (by Order in Council) on the recommendation of the Minister (sections 53(1) and (2)). Accordingly, the Minister has a discretion as to whether to recommend that goods or services be controlled under the Commerce Act.

2.51. The Minister has requested the Commission to report on whether it considers market conditions are such that the Minister should recommend control.

2.52. The Commission, in answering this question, must take into account what it considers to be the relevant considerations. In determining the relevant considerations the Commission considers it should have regard to the wider scheme of the Commerce Act, and to the goals that the Commerce Act is intended to promote.

2.53. In this respect, the former long title of the Commerce Act stated that its purpose was to promote competition in markets in New Zealand. In discussing this the Court of Appeal in *Tru Tone Ltd v Festival Records* stated that the Commerce Act:[18]

> ...is based on the premise that society's resources are best allocated in a competitive market where rivalry between firms ensures maximum efficiency in the use of resources.

2.54. The Commerce Act was subsequently amended in 1990, with the addition of section 3A, which seems to place a greater stress on efficiency in the implementation of the public benefit test. Accordingly, where the Commission is required under this

[18] (1988) 2 TCLR 542,548.

Commerce Act to determine whether or not, or the extent to which, conduct will result, or will be likely to result, in a benefit to the public, the Commission shall have regard to any efficiencies that the Commission considers will result, or will be likely to result, from that conduct.

2.55. The (current) purpose of the Commerce Act is stated as to "promote competition in markets for the long-term benefit of consumers within New Zealand". The particular reference to the "long-term" benefit to consumers within New Zealand appears to confirm that an efficiency based analysis in determining matters under the Commerce Act would be consistent with the Commerce Act's purpose. Certainly, in the long-term, New Zealand consumers in general will benefit from continuous improvements in the allocation of resources, and the nature of products and production processes, which is usually encouraged by the competitive process. The Commission concludes that in this context the object of the control provisions is to address circumstances where markets, due to a lack of competition, may not be delivering efficient outcomes for consumers. And that any recommendation as to whether control should be imposed should be based on an assessment of the likely long-term benefit to consumers within New Zealand. Such long-term benefits may be considered in terms of allocative, productive and dynamic efficiencies, and product quality.

2.56. The Commission has some experience in conducting such efficiency based analysis. In particular, in determining applications for an authorisation under sections 58 and 67 of the Commerce Act, where the Commission measures the benefits and detriments of a proposed merger or acquisition against a counterfactual. Such an analysis is termed a "public benefit" (also referred to as a "net benefit") test and focuses on economic efficiency.

2.57. Similarly, in considering whether control should be imposed, and in assessing the effect of control in terms of the long-term benefit of consumers in New Zealand (as directed by the purpose of the Commerce Act), the Commission concludes that it is appropriate to conduct a "public benefit" (also referred to as a "net benefit") test. In conducting such a test, and in assessing the benefits and detriments of control, the Commission considers that it will take into account economic efficiency (under the headings allocative, productive, and dynamic efficiency) and product quality. And in assessing the public benefit, the Commission will assess net efficiency gains from control.

2.58. In addition to conducting an efficiency based analysis, the Commission also considers as relevant considerations, the extent to which competition is limited, the necessity or desirability of safeguarding relevant parties' interests, and the existence of any other forms of market correction.

2.59. The discussion on whether the Commission considers that market conditions are such that the Minister should recommend that the airfield activities supplied by AIAL, WIAL and/or CIAL be controlled is contained in chapter 14 of this report.

THE FORM OF ANY CONTROL IMPOSED

2.60. The Minister's request posed a final question:

> If price control was introduced (i) what form of price control would the Commission apply; (ii) and why; (iii) how would the Commission operate this form of price control; and (iv) what time and/or in what conditions should price control end?

2.61. Under section 70 of the Commerce Act, the Commission may make an authorisation in respect of controlled goods or services. This final question relates to the Commission's powers to authorise all or any component of prices, revenues, or quality standards of controlled goods or services, using whatever approach it considers appropriate. The approach may include the use or formulas or other methods from which prices or revenues may be determined.

2.62. Under section 70B, the Commission is required to follow a particular process in reaching a decision as to the nature and form of any control. As part of that process acquirers and suppliers have a right to be heard and the Commission must have regard to any submissions they make. This process must logically take place at some point after control has been declared, as the Commission's power to authorise applies only to controlled goods or services, and goods and services are controlled when an Order in Council declares them to be so. (Section 71 covers the transitional period directly after a declaration of control by allowing the Commission to make provisional authorisations pending the making of a final determination under section 70).

2.63. The Commission's view is that considering these matters to the extent sought by the Minister's request, prior to any declaration of control, is inconsistent with the particular procedure for authorisations in respect of controlled goods or services. Accordingly the Commission does not answer this final part of the Notice.

2.64. However, the possible forms of control are considered on the basis that, and only to the extent that, in order for it to undertake a cost benefit analysis and determine whether control of airfield activities is recommended, the Commission needs to consider what form of control might possibly be imposed.

STRUCTURE OF THE REMAINDER OF THIS REPORT

2.65. In conducting this inquiry, the Commission firstly has to ascertain to what extent any airfield activities are supplied by AIAL, WIAL or CIAL in market(s) in which competition is limited or is likely to be lessened. Having done this, the Commission is required to consider whether control is necessary or desirable in the interests of acquirers in respect of the charges for airfield activities at any of the three specified airports, and whether the Minister should make a recommendation resulting in the imposition of price control over such charges.

2.66. The key chapters of the remainder of this report are as follows:

- Examining airfield activities at the three relevant airports to determine whether airfield activities are supplied or acquired in markets in which competition is limited or is likely to be lessened. — Chapter 5
- Assessment of whether control is necessary or desirable in the interests of the direct and indirect acquirers of airfield activities at the three relevant airports. — Chapter 13

- Should the Minister recommend control? Public benefits analysis of the effects of control. Chapter 14
- Conclusions and recommendations Chapter 15

3. REGULATORY BACKGROUND

INTRODUCTION

3.1. The operation of civil aviation and airports in New Zealand is governed by a combination of international obligations and agreements, domestic legislation, and ancillary rules and regulations. This chapter of the report outlines the international obligations, and then proceeds to discuss the domestic legislation and regulations, under the headings of economic regulation, safety and security regulation, and environmental regulation.

INTERNATIONAL OBLIGATIONS

3.2. The primary international regulatory means of controlling the aviation industry are the directives of the International Civil Aviation Organisation (ICAO), and the agreement and enforcement of bilateral Air Service Agreements. New Zealand is required to comply with the directives of ICAO, and is also party to a number of Air Service Agreements. Both of these means of regulation therefore have some degree of impact on the operation of civil aviation, and airports, in New Zealand.

International Civil Aviation Organisation

3.3. ICAO, an inter-government organisation, was established in 1947 following the introduction of the "Convention on International Civil Aviation" (the Chicago Convention)[19]. The Chicago Convention has been ratified by 185 countries, including New Zealand. The Convention requires New Zealand's international airports to adhere to certain establishment and operational standards and recommendations.

3.4. Although the Chicago Convention provides for ICAO to play a part in the economic regulation of international air transport, the organisation has traditionally not focused on that area, preferring instead to generally limit regulation to matters affecting aviation safety and security. ICAO's main priorities are to ensure safety and security in the operation of international civil air transport. ICAO policies along this line take three forms, binding obligations in the Chicago Convention, Statements to Contracting States, and advisory manuals.

3.5. Although the Convention does provide for arbitration as a means to settle disputes, ICAO does not possess any powers of enforcement, and generally attempts to achieve its aims through persuasion and agreement. The organisation is typically dependant on member states incorporating its policies and recommendations into domestic law.[20]

---

[19] The Chicago Convention is in 4 parts and has 96 Articles. Part 1 deals with Air Navigation, part 2 establishes ICAO, part 3 covers international Air Transport, and Part 4 details further administrative matters. The convention also has 18 Annexes, which contain more detailed recommendations and standards.

[20] Section 91C of the Civil Aviation Act 1990 states that the provisions of the Chicago Convention, as they relate to the rights and liabilities of carriers, carriers' servants and agents, passengers, consignors, consignees, and other persons, have the force of law in New Zealand.

ICAO conducts regular audits to ascertain a state's conformity with the standards and recommended practices.[21]

Convention Requirements, Standards and Recommended Practices

3.6. The Commission has examined the Convention and its articles. The specific articles and annexes to the Convention relevant to the operation of airports are:

- Article 10, which requires aircraft which land in the territory of a contracting state to land only at an airport designated by that State as for the purposes of customs and other examination. Similarly, on departure from that State's territory the aircraft must also depart from an appropriately designated airport.

- Article 15, which relates to airport charges, and requires that aircraft of other contracting countries engaged in international air services are not subjected to higher charges for the use of airports and navigational facilities than the aircraft of the designated national carriers of the home contracting country.

- Article 68, which provides that each contracting state may designate the airports, and air routes, that any international air service may use within its territory.

- Annex 14 (to Article 37), which details standards and recommended practices for the design and operation of aerodromes.

ICAO Statements

3.7. ICAO also issues what is known as Council Statements. Unlike the Convention's articles and annexes, the contracting states are not bound to adhere to the provisions and recommendations contained in Council Statements.

3.8. ICAO has issued a Council Statement (in the latest version it is referred to as a policy) that deals particularly with charges for Airports and Air Navigation Services.[22] The Statement details the principles and guidelines for determining airport and navigation charges, and includes comment on the cost basis for airport charges, charging systems and user consultation. As a general principle, the Statement suggests that it is desirable that the users of an airport ultimately bear their full and fair share of the cost of providing the airport.

3.9. The Statement also recommends:

- That airport charging systems be simple and suitable for general application.

- That the airport charges be non-discriminatory.

---

[21] ICAO strategic Action Plan, 12 June 2000.

[22] *ICAO's Policies on Charges for Airports and Air Navigation Services,* sixth edition, 2001, ICAO document 9082/6.

- That airport landing charges be based on a weight formula, using the maximum permissible take-off weight of aircraft as indicated in airworthiness certificates.

3.10. In addition, the statement also suggests that consultation between airports and its users is desirable before decisions are made as to airport charges and planning. And that the purpose of such consultation is to ensure that airports give consideration to the views of users and the effect that the charges will have on users. The Statement also suggests that consultation implies discussion between users and airports in an effort to reach general agreement on any proposed charges. The Statement proposes that failing such agreement, airport authorities would continue to be free to impose the charges concerned.

ICAO Advisory Manuals

3.11. ICAO also issues advisory manuals. These manuals have less standing than Council Statements. In 1991 ICAO issued an Airport Economics Manual[23] to provide practical guidance material for those responsible for airport management. The manual includes discussion on organisational structures, financial controls, determining the cost basis for charging purposes, and financing airport infrastructure. The Airports Council International[24] view this manual as providing advisory and technical material for use by States and airports attempting to develop or improve their financial and commercial systems, and improve their financial efficiency and self-sufficiency.[25]

Air Service Agreements

3.12. Article 1 of the Chicago Convention provides for complete and absolute sovereignty to each nation over the air space above its territory, and consequently, confirms the legal authority for states to grant and exchange "Aviation Rights of Passage" (commonly known as freedoms[26]) to other states. Such rights are exchanged through inter-governmental bilateral agreements, known as Air Service Agreements (ASAs). ICAO acts in an administrative capacity in recording ASAs.

3.13. Under this bilateral agreement system, international air transport does not take place unless it is expressly permitted by an ASA. The bilateral system assumes that each country has its own 'substantially owned and effectively controlled' designated national flag carrier.[27] Non-scheduled services (including charters) generally fall outside the bilateral system, although some ASAs contain provisions relating to them.

---

[23] *Airport Economics Manual,* ICAO, Document 9562.

[24] A non-profit organisation established in 1991. Its primary purpose is to foster cooperation among its member airports.

[25] Airports Council International. (Self-sufficiency in the sense that an airport is able to meet its operational costs without requiring central or local government financial support).

[26] There are 8 distinct 'freedoms' that states can confer. These include the right to fly over, to, from, between, and beyond, another country's territory.

[27] In New Zealand and Australia this requirement is defined as being where foreign ownership is not more than 49 per cent, a single foreign airline owns not more than 25 per cent, and all foreign carriers own not more than 35 per cent

3.14. As a result of the bilateral agreement system, the international airline industry is relatively heavily regulated. New Zealand has concluded ASAs with 43 bilateral partners to date.[28] New Zealand also operates liberal market arrangements under the Single Aviation Market with Australia, which allows for unrestricted capacity on trans-Tasman routes and within each country

3.15. Many of the ASAs contain provisions that relate to user charges for airports. The New Zealand Government's approach is generally to omit or remove provisions dealing with such user charges, on the grounds that the government has no role in implementing or overseeing pricing regimes, and that entities which feel themselves disadvantaged by discriminatory pricing can seek redress through the Commerce Act 1986. However, despite adopting this stance, at the insistence of other countries, many of New Zealand's ASAs do actually contain provisions dealing with user charges. These provisions typically state that such charges should be "just", "reasonable" and "non-discriminatory".

3.16. In negotiating ASAs the New Zealand Government does not impose any restrictions as to which airports may be serviced. The New Zealand Government's approach is to leave the choice to the foreign airline's commercial assessment. ASAs thus generally do not impinge upon either Air New Zealand's or a foreign airline's ability to substitute between New Zealand airports. However, on occasions foreign governments do specify the New Zealand airport(s) able to be used.

DOMESTIC LEGISLATION AND REGULATION

3.17. There are a number of New Zealand Acts applicable to the operation of civil aviation, and in particular, airports, in New Zealand. They essentially deal with three distinct areas: economic issues, safety and security, and environmental issues.

Economic Regulation

3.18. Economic regulation is concerned primarily with the efficiency of civil aviation. Some form of airport economic regulation is common internationally. The regulatory development process is likely to be influenced by various interest groups, including the airports themselves, the airlines, and the local community, whom often see an airport as a means of stimulating the local economy through an increased flow of visitors. The exact form of economic regulation may be influenced by the nature of the airport company's management structure, its objectives, performance monitoring and its ownership.

3.19. In addition to the regulatory tools discussed below, it is also recognised that the airport companies are commercially constrained to some extent by the existence of a limited degree of competition between airports for international carriers. And also further constrained by the existence of a small number of airline companies allegedly possessing some degree of countervailing power.

---

[28] Ministry of Transport, International Air Transport Information, http://www.govt.nz/archives/mitransport/iat/index.html 6/11/00.

Airport Authorities Act 1966

3.20. In New Zealand there has been a long history of co-operation between central and local government in the provision of both regional and international airports. Traditionally the standard mechanism for carrying on this relationship had been a joint venture agreement. Such partnerships date back to the (now repealed) Local Authorities Empowering (Aviation Encouragement) Act 1929.

3.21. In terms of the practical operation of airports the Crown had generally been concerned with the provision of safety facilities, such as air traffic control and rescue fire services, and the local authorities concerned with managing and operating the terminals and commercial activities. Revenues and costs had typically been shared equally between the joint venture partners.

3.22. The ownership mechanism and operation of airports was overhauled with the passing of the Airport Authorities Act 1966. This Act consolidated and amended the Local Authorities Empowering (Aviation Encouragement) Act 1929, and essentially allowed local authorities to operate as "airport authorities", expressly empowering these "airport authorities" to establish, improve, maintain, operate, or manage airports. This was subject to the consent of, and in accordance with any conditions imposed by, the Crown.

3.23. While designed as a means of facilitating airport development, the "airport authorities" (central and local government partnerships) were not regarded as providing the best mechanism for commercial airport operation.[29] Pricing and costing procedures were fairly primitive: costs were not allocated in any detailed way; revenues were gained by a simple percentage charge on airline revenues and weight charges, which meant that commercial operators subsidised non-commercial, regardless of cost; and there was no special effort to measure returns obtained. Imbalances between revenues and development requirements were common, and local body decision-making procedures were cumbersome, and impaired by central government capital expenditure controls.[30]

Airport Authorities Amendment Act 1986

3.24. Government concern with airport inefficiency led to a decision in 1985 to corporatise the airports. In 1986 an amendment to the Airport Authorities Act 1966, under which a new section 3A was inserted into the principal Act, enabled airports to become limited liability companies under the Companies Act 1955. The incorporation process required obtaining a valuation for each airport, determining the respective shareholdings of the Crown and local bodies (based generally on their respective contributions to the airport's development), and appointing a board of directors. It is noted that section 5(3) of the Airport Authorities Amendment Act 1986 required each airport company to operate as a commercial undertaking.

---

[29] *Airports – A New Partnership*, Wellington: Office of Minister of Civil Aviation, 14 June 1985.

[30] Ministry of Transport, *Review of New Zealand Airport Regulation: Proposals for Consultation*, Wellington: MOT, 1995, p.3.

3.25. With regard to Auckland Airport the Crown and the local bodies could not reach agreement in forming the new corporation, and special legislation, the Auckland Airport Act 1987, was passed to incorporate the new company as from 1 April 1988. Christchurch International Airport Limited was incorporated on 1 July 1988. No special legislation was necessary as the Crown and local bodies were able to agree upon a transfer price and incorporation. At Wellington, prolonged negotiations as to valuation took place, however, prior to agreement being reached, legislation was introduced along the lines used for Auckland International Airport Ltd. The Wellington Airport Act 1990 led to Wellington International Airport being incorporated on 16 October 1990.

3.26. As well as establishing the framework for incorporating airport companies, the Airport Authorities Amendment Act 1986 also provided for airport companies, after consultation with its airline customers, to set charges for the use of their services and facilities.[31] This statutory obligation to "consult" users about changes has been the basis of dispute between airports and its users. In the case of Wellington and Dunedin airports, this has led to court litigation.[32] Also, Air New Zealand has recently commenced proceedings against AIAL in regard to its consultation obligations, and its announcement of an 8.5% price increase in landing charges effective from 1 September 2000, and further increases of 5% in each of the next two years.

3.27. The Wellington airport litigation suggests that if a party having the power to make a decision after consultation holds meetings with the parties it is required to consult, provides those parties with relevant information and with such further information as they request, enters the meetings with an open mind, takes due notice of what is said, and waits until they have had their say before making a decision, then the decision is properly described as having been made after consultation. [33]

Airport Authorities Amendment Act 1988

3.28. The initial constraint that shareholders in an airport company were to be limited to the Crown, local authorities and the Airways Corporation, was removed by a further amendment to the Airport Authorities Act in 1988.

3.29. The Government subsequently announced in its 1988 Budget its intention to sell its shareholdings in the international airports, subject to the implementation of regulatory reforms necessary to establish the competitiveness of the market in which the businesses operated.

3.30. An officials committee was formed to report on the regulatory issues involved, and the committee appointed Travers Morgan Pty Limited (Travers Morgan) to report on competition and efficiency in the airport sector.[34] Two central concerns were expressed by officials:

---

[31] Section 5(3) Airport Authorities Amendment Act 1986.

[32] *Wellington International Airport Ltd. v Air New Zealand* [1993] 1 NZLR, 671. *Dunedin Airport Ltd v The Mount Cook Group Ltd* (30/09/96) CP34/96.

[33] *Wellington International Airport Ltd. v Air New Zealand* [1993] 1 NZLR, 671, 672.

[34] Travers Morgan, *Airports Regulatory Review*, Wellington: Ministry of Commerce/Transport, 1989.

- The possibility of monopoly pricing by the airports.

- The possible effects of an airline shareholder in an airport using its influence to disadvantage other airline competitors.

3.31. The Travers Morgan report's conclusions included, that:

- There was little competition between airports.

- There were considerable forces acting against the exercise of monopoly power by the airports, with the most important of these forces being the countervailing power of the airlines as the main customers of the airports.[35]

- The threat of regulation acted as a constraint on the airports' exercise of market power.

- Section 36 of the Commerce Act should be sufficient to prevent most discriminatory activities by airports.

3.32. The Officials Committee favoured a continuation of the then existing form of regulation, which it considered was adequate to ensure that airports did not exploit their monopoly power, even if they were to be privatised. The Officials Committee commented that: [36]

> In the case of New Zealand's international airports, officials have argued that the countervailing power of the {airlines} and the provisions of the Commerce Act are a sufficient constraint on the airport companies to make heavy regulation unnecessary.

Airport Authorities Amendment Act 1997

3.33. In 1995 the Government undertook a review of the Airport Authorities Act 1966. The Government produced a consultative document at that time stating its view that "current legislation provides insufficient protection for airport users against potential abuse by airports of their monopoly power".[37] The Government review was essentially guided by two principles, first, the promotion of efficient pricing, and second, the desire for optimal investment in airport facilities

3.34. The review concluded that although there was the potential for airport companies to extract monopoly rents from airlines, no evidence of monopoly pricing was identified.

---

[35] Available avenues included airline non-cooperation in such matters as early payment of charges or day to day operations in the airports, consultation (in term of the Airport Authorities Act 1966), threats of regulation or political action, and bilateral aviation agreements that airport charges be "just and reasonable".

[36] Report by the Chairman of the Officials Committee, *Regulatory Issues arising from the sale of the Crown's interests in New Zealand's three international airports,* 5 March 1990.

[37] Ministry of Transport, *Review of New Zealand Airport Regulation,* April 1995.

3.35. The review did, however, recommend amendments to the Airport Authorities Act, in the form of the Airport Authorities Amendment Act 1997. During the Third Reading of the Amendment Bill, the Hon. Maurice Williamson (on behalf of the Minister of Transport), stated:

> The objective of this Bill is to protect against a possibility of monopoly pricing by airport companies and to protect consumers' interests……
>
> Achieving that objective will ensure that airport companies provide their services efficiently and investment in new airport facilities reflects the growing demands for air travel and air freight.

3.36. The Amendment Bill essentially sought to strengthen the consultation requirements on "specified" (larger) airports companies—those with annual revenue exceeding $10 million, and hence AIAL, WIAL and CIAL—and make provision for the introduction of information disclosure regulations.

3.37. In particular, section 4 of the Airport Authorities Amendment Act 1997[38] required "specified" airports to consult with "substantial customers"[39] over charges for "identified airport activities" (and also for direct charges payable by any passenger in respect of "identified airport activities").

3.38. Further, the Airport Authorities Amendment Act 1997 also provided that "specified" airports must consult "substantial customers" on capital expenditure plans in relation to "identified airport activities" which are likely, within the following five years, to exceed 20% of the value of the company's identified assets.

3.39. The Act specifically provided that consultation must take place before airports fix or alter any charges for "identified airport activities", and also, within five years after fixing or altering any charges for "identified airport activities". The "identified airport activities" are defined in the Act as:

- *Airfield Activities* – the services and facilities provided to enable the take-off and landing of aircraft. This includes airfields, runways, taxiways and aprons; facilities of air traffic and apron control; airfield and associated lighting; the maintenance and repair of runways, etc.; and rescue, fire, safety and environmental hazard control.

- *Aircraft and Freight Activities* – the servicing and maintenance of aircraft, and the handling of freight. This includes hangars; aircraft refuelling facilities; flight catering; waste disposal; warehousing; and security, customs and quarantine services for freight.

- *Specified Passenger Terminal Activities* – the facilities and services provided for airline passengers whilst in the terminal. This includes seating areas, thoroughfares and air bridges; flight information and public address systems; facilities for the operation of customs, immigration, and quarantine checks and

---

[38] Inserted section 4B into the principal Act.

[39] Substantial customers are defined as any person that contributes more than 5% of the airport's accounting period revenues in relation to "identified airport activities".

control; facilities for the collection of duty-free items; facilities for the operation of security and police services; and passenger check-in and baggage handling.

3.40. As discussed earlier, the exact nature and significance attached to consultation by the airlines and the airports has been a point of contention.

Airport Authorities (Airport Companies Information Disclosure) Regulations 1999

3.41. Section 9A of the Airport Authorities Act[40] provides for the Governor General, by Order in Council, to introduce regulations requiring airport companies to disclose information in relation to their "identified airport activities". The Airport Authorities (Airport Companies Information Disclosure) Regulations 1999 apply to financial statements prepared on or after 1 January 2000.

3.42. In summary, the Disclosure Regulations require the specified airport companies (and hence AIAL, WIAL and CIAL) to disclose the following information:

- Audited segmented financial statements for identified airport activities.
- Passenger charges and charges for identified airport activities; and the methodology used to determine the charges.
- The basis for allocating assets to identified airport activities.
- Details of asset revaluations.
- Operating costs of identified airport activities.
- Weighted average cost of capital (WACC) and the methodology and calculations used to determine WACC.
- Numbers of passenger and aircraft movements.
- Interruptions to services.
- Number of people employed in identified airport activities.

3.43. The disclosure regulations do not require the use of any specific methodologies for the purposes of the disclosures or pricing, but simply require compliance with generally accepted accounting practice. Although it has not been exercised, there is provision for the Secretary for Transport to issue guidelines for the methodologies used to value assets, calculate WACC, and allocate revenues, costs, assets, and liabilities, to identified airport activities.

Self-Regulation

3.44. Shortly after incorporation both AIAL and CIAL entered into a memorandum of understanding (MOU) with their respective airline users. These memorandi

[40] Introduced through section 6 of the Airport Authorities Amendment Act 1997.

essentially provided a code of practice for consultation. Further, AIAL's agreement confirmed a profit ceiling of 10% after tax on shareholders' funds on the airfield and terminal cost centres, and 5% after tax on shareholders' funds on the rescue fire cost centre. CIAL's agreement confirmed a profit target of 10% after tax on shareholders' funds on the airfield and terminal cost centres.

3.45. Neither the airports or the airlines presently place any significance on these memorandi. In this regard, BARNZ has advised the Commission that they see these memorandi as having no legal standing. Similarly, AIAL consider that the memorandum they entered into has been superseded by events such as the public offering, the imposition of statutory consultation, and the introduction of a disclosure regime.

3.46. In addition to the MOUs, some charges are set by commercial agreement. AIAL has a terminal services agreement with international airlines in respect of the use of common areas of its international terminal building. WIAL has a deed with its substantial customers which sets airport charges.

The Commerce Act 1986

3.47. The purpose of the Commerce Act is to promote competition in markets within New Zealand. To meet this purpose the Act prohibits a number of restrictive trade practices, prohibits business acquisitions and mergers that lead to the creation or strengthening of a dominant market position, and provides for the imposition of price control where goods or services are supplied (or acquired) in a market in which competition is limited, or is likely to be lessened, and it is necessary or desirable for the prices of those goods or services to be controlled, in the interests of users, or consumers, or, as the case may be, of suppliers.

3.48. Accordingly, the Airport companies', in conducting their business affairs, are required to consider and adhere to the trade and acquisition provisions contained in the Commerce Act. Such considerations are particularly relevant given the alleged market power possessed by airport companies. In addition, the threat of price control under the Commerce Act also exists to act as a constraint on how the airport companies conduct their business.

Safety and Security

Civil Aviation Act 1990

3.49. The primary legislation in New Zealand for dealing with civil aviation safety and security is the Civil Aviation Act 1990.[41] The purpose of the Civil Aviation Act 1990 is to promote aviation safety through establishing rules of operation and divisions of responsibility; and to ensure that New Zealand's obligations under international aviation agreements are implemented.

3.50. The Civil Aviation Authority (CAA), an independent Crown entity, was established by the Civil Aviation Amendment Act 1992. The principal function of the CAA is to

[41] This Act replaced the *Civil Aviation Act 1964*.

undertake activities, at a reasonable cost, which promote safety in civil aviation. It is headed by a five-member authority and reports directly to the Minister of Transport.

3.51. The CAA establishes and monitors compliance with safety and security standards, and issues certificates to those intending to engage in aviation-related activities. Aviation operators are required to achieve a set standard before they can be certified to operate. The CAA undertakes regular reviews of the civil aviation system to promote the improvement and development of safety and security.

3.52. The CAA also provides advice to the Minister of Transport; promotes safety and security in civil aviation through providing information, advice and education programmes; provides search and rescue services; and acts on behalf of the Crown in respect of ICAO.

Civil Aviation Rules

3.53. The Minister of Transport, pursuant to section 28 of the Civil Aviation Act, has introduced Civil Aviation Rules (CARs) which set out the safety and security regulatory framework within which civil aviation in New Zealand is to operate.[42] The rules deal with areas including regulation of aircraft, personnel, airspace, and aerodromes. The Rules generally follow the standards and recommended practices established internationally by ICAO, subject to some limited modifications to meet local conditions.

3.54. Aviation security at airports is carried out by the Aviation Security Service, a commercially run business whose operation and management is the responsibility of the CAA Board. That service is monitored by the Aviation Security Regulatory Unit of the CAA.

3.55. The main rules applicable to airports are provided in Parts 139 and 157 of the CARs. Part 139 sets out the Rules applying to the certification (i.e., entry standards), operation, security, and use of aerodromes. Part 157 relates to the construction, alteration, activation and deactivation of aerodromes and heliports.

3.56. Part 139 of the CARs states that an aerodrome serving any aircraft having a seating capacity of more than 30 passengers which is engaged in regular air transport operations must hold an aerodrome operating certificate. A certificate may be granted or renewed for up to five years. To gain a certificate the aerodrome must:

- Satisfy certain design characteristics (e.g., length and width of runway, width of "strip", spacing between runway and taxiway, visual aids, equipment and installations, etc.).

- Employ appropriate personnel.

---

[42] The CAA has completed a five-year rewriting of all of the Civil Aviation Rules. The rewritten rules came into force on 1 April 1997. The rewritten rules replaced the former *Civil Aviation Regulations 1953*, which were revoked on 1 April 1997.

- Establish a rescue and firefighting capability related to the largest plane type regularly using the airport.

- Establish safeguard measures to protect the public, including having an appropriate emergency plan.

- Have a wildlife hazard management programme where necessary.

- Establish internal quality assurance procedures to ensure compliance.

- Have an exposition (including manuals) setting out the operator's organisation chart and identifying senior people, together with the various plans, systems, procedures and programmes required by the certification and operating requirements of Part 139.

3.57. The operating requirements stated in Part 139 include:

- The employment of an aerodrome maintenance programme to ensure that the aerodrome facilities do not impair the safety, security, regularity or efficiency of aircraft operations.

- Ensuring that the rescue and firefighting operational requirements are met.

- Providing an apron management service when warranted by the volume of traffic and operating conditions (only Auckland is currently required to do so, and it uses its own staff).

- Limiting access to the operational area to those ground vehicles necessary for aerodrome and aircraft operations, and providing adequate procedures for safe and orderly access, including ensuring that access by tenants and contractors complies with the aerodrome operator's rules for the operation of ground vehicles.

3.58. Aerodrome security requirements depend upon whether the aerodrome is "security designated" or not. Auckland, Wellington, and Christchurch airports (amongst others) are all security designated airports, and as such are required to prevent unauthorised access to the aerodrome security area by means of perimeter fences, gates and other barriers. The security area generally covers the airfield and areas in terminals on the air-side of the gate access to aircraft. Such aerodromes must provide areas for the screening of international passengers and baggage prior to boarding; sterile areas where screened passengers are prevented from having access to unscreened people; and the separation of arriving and departing international passengers.

3.59. Non-security designated aerodromes must have a contingency plan to introduce passenger and baggage screening when so required by the CAA in response to a security threat.

3.60. The CAA Industry Rules Advisory Group is presently reviewing the rules relating to aerodrome certification, operation and use, runway end safety areas, and rescue fire services.

Environmental Regulation

3.61. The third area of regulation relevant to the operation of airports is environmental regulation. Of particular relevance to the establishment and operation of airports are rules relating to land use, noise levels and by-products. The primary tools for regulating these matters are the Resource Management Act 1991, the Civil Aviation Rules (made under the Civil Aviation Act), and the Biosecurity Act 1993.

The Resource Management Act 1991

3.62. The Resource Management Act 1991 essentially details the law relating to the use of land, air and water. Accordingly, the establishment, development and operation of airports are subject to obtaining the relevant resource consents under the Act.

3.63. In addition, the Resource Management Act 1991 requires territorial authorities to prepare, implement and administer district plans. The district plans must detail any matter relating to the use, development, or protection of any natural and physical resources for which the regional council has responsibility. Plans have a life of up to ten years before they are reviewed. Airports can be particularly affected through these plans in regard to proposed developments, and noise levels.

3.64. In 1992, the New Zealand Standards Association developed a standard (NZ 6805: 1992) for use by local bodies in regulating airport noise which has become a key part of district plans for the control of aircraft noise. This standard involves the use of a noise boundary (or contour) line around an airport, and established a measure of sound level that cannot be exceeded at points beyond the noise boundary. The measure is a cumulative measure, averaged out over a three month period. The position of the air-noise boundary in relation to noise level from current use determines whether there is scope for noise levels to be increased.[43]

3.65. Both AIAL and CIAL hold substantial 'land banks' around the airport property. This holdings are held in part to prevent building and land use developments which might in the future be regarded as incompatible with airport noise. WIAL is not in a position to do this, but it has made purchases of land and residential properties in noise (and air navigation) sensitive positions.

3.66. The approach to reducing airport noise pollution in New Zealand has essentially been based on the adoption of measures such as the imposition of night curfews, restrictions on residential developments around airports, phasing out of older, noisier aircraft, and requiring modifications to noisy jets (e.g., fitting 'hush kits'). An alternative approach used at some overseas airports is to add a noise component to aircraft landing charges, using a "polluter pays" principle, with noisier aircraft being charged a premium. Clearly, such an approach could have ramifications for price control if it were to be introduced in respect of landing charges.

[43] For example, maybe an airport would be allowed to accommodate an additional number of relatively noisy aircraft, or perhaps a greater number of relatively quiet aircraft.

Civil Aviation Rules

3.67. Part 93 of the Civil Aviation Rules deals with aerodrome noise abatement procedures. In regard to Auckland, Wellington and Christchurch International Airports, it specifies certain procedures that pilots-in-command must abide with when approaching and departing the airports. The Rules detail the relevant noise abatement areas, specify approach and departure paths, and establish minimum altitudes.

Biosecurity Act 1993

3.68. The Biosecurity Act 1993 came into force in October 1993, and governs the treatment and disposal of quarantine waste. The Act imposes strict requirements covering the carriage, storage and disposal of quarantine waste. In addition, the Director General of the Ministry of Agriculture and Forestry has drafted standards specifying the quarantine requirements which must be met by aircraft and vessels entering New Zealand.

CONCLUSION

3.69. As highlighted in the preceding discussion there is a myriad of regulations that influence the operation of civil aviation, and in particular, airports, in New Zealand. These regulatory influences range from international conventions, bilateral agreements, domestic legislation, and Government regulations, and generally deal with either economic, safety and security, or environmental issues.

3.70. Given the context of this inquiry it is perhaps helpful to summarise the economic regulatory framework employed to promote efficiency in the operation of New Zealand's airports. This being:

- A recognition of the need for a level regulatory playing field.
- The opportunity for airline customers to engage in discussion with airports.
- The requirement on airport operators to consult airline customers when setting charges under section 4(2)(a) of the Airport Authorities Act 1966.
- The Airport Authorities (Airport Companies Information Disclosure) Regulations 1999
- The restrictive trade practice provisions of the Commerce Act 1986.
- The threat of price control under section 53 of the Commerce Act 1986.

4. THE AIRPORTS

INTRODUCTION

4.1. This chapter draws on these earlier chapters and profiles the subject airports. Specifically, it:

- Describes, in detail, the activities undertaken—the goods or services provided—including the assets owned, by each airport company.
- Classifies or groups, for each airport, the activities in terms of identified airport activities defined in the Airport Authorities Act and other airport activities, noting (where applicable) the activities undertaken by third parties.
- Details the users, consumers and suppliers of each airport.
- Details the prices that each airport company charges for, and/or the revenues generated from, various activities.

4.2. In essence, this chapter describes the goods and services, and the prices or revenues for them, that the Commission—in the remainder of this report—considers in determining whether it would be necessary or desirable in the interests of acquirers to control, and whether the Minister should recommend control. Chapter 5 identifies the goods and services that "are supplied or acquired in a market in which competition is limited or is likely to be lessened". For those goods and services identified, chapters 6 to 13 determine whether it is necessary or desirable in the interests of acquirers to impose control over the supply of them. Chapter 14 considers whether the Minister should recommend control of airfield activities.

INTERPRETATION

4.3. Readers should refer to the list of definitions included in this report when reading this chapter. Section 2 of the Commerce Act provides definitions for goods, services, supply (and supplier), acquire and price; and some of these terms are interpreted below (along with the term revenue). In addition, the Airport Authorities Amendment Act 1997 (the Airport Authorities Amendment Act) specifically defines airport activities, charges, and substantial customers.

Identified Airport Activities

4.4. The Airport Authorities Amendment Act defines "identified airport activities" to comprise any one or more of airfield activities, aircraft and freight activities, and specified passenger terminal activities; each of which are also defined in the Act. Each activity is defined in terms of the current activities undertaken (including the facilities and services provided) as well as the holding of facilities and assets (including land) to provide the activity in the future.

- *Airfield activities* are defined as the activities undertaken (including the facilities and services provided) to enable the take-off and landing of aircraft.

- *Aircraft and freight activities* are defined as the activities undertaken (including the facilities and services provided) to enable—within a security area or areas of the relevant airport—the servicing and maintenance of aircraft, and the handling of freight transported, or to be transported, by aircraft.

- *Specified passenger terminal activities* are defined as the activities undertaken (including the facilities and services provided) in relation to aircraft passengers while those passengers are in a security area or areas of the relevant airport, including to enable check-in and baggage handling in respect of those passengers.

4.5. Both aircraft and freight activities and specified passenger terminal activities are defined with reference to *a security area or areas of the relevant airport*. The Airport Authorities Amendment Act defines a security area to be an area of the airport that the Director of Civil Aviation has declared to be a security area under section 84 of the Civil Aviation Act 1990. Practically, security areas are those areas where a person has to present a boarding pass or valid CAA airport identity card to gain access.

4.6. Three issues have been identified in respect of the reference (in the definitions) to the security areas of an airport:

- Security areas at an airport are not necessarily indicative of the split between the non-contestable and contestable areas of an airport.

- Security areas at each airport vary, due to layout of terminal buildings and the airfield.

- A number of facilities and services are provided outside the security area of an airport (and even off airport) which would otherwise fall within the definitions. This problem is particularly an issue with aircraft and freight activities and the provision of facilities and services for waste disposal, flight catering, and so forth.

4.7. Strict application of these definitions is unhelpful for comparing the activities undertaken at each airport. As a result, a practical and less strict application of the definitions is taken in this chapter of the report.

Charges

4.8. Section 4 of the Airport Authorities Amendment Act allows an airport company—after consulting with substantial customers—to set such charges as it thinks fit for the use of the airport and its services or facilities. Charges are further defined (under the Act) to include fees or dues and also rent payable under any lease.

4.9. Section 2 of the Commerce Act defines “price” to include “valuable consideration in any form, whether direct or indirect; and includes any consideration that in effect relates to the acquisition or supply of goods or services or the acquisition or disposition of any interest in land, although ostensibly relating to any other matter or thing”.

4.10. The Commerce Act does not define the term "revenue". The Concise Oxford Dictionary defines revenue as "income...from any source; items constituting {income}".[44] The Concise Oxford Dictionary defines income as "periodical receipts from one's business, lands, work, investments etc."[45]

Substantial Customers

4.11. The Airport Authorities Amendment Act defines a *substantial customer* to be a person who pays (or is liable to pay) more than 5% of an airport's annual revenues in relation to identified airport activities. In addition, a person who is authorised in writing to represent a number of persons who in aggregate pay (or are liable to pay) more than 5% of an airport's annual revenues in relation to identified airport activities (for example, the Board of Airline Representatives of New Zealand Inc. (BARNZ)) is deemed to be a substantial customer.

AUCKLAND INTERNATIONAL AIRPORT LIMITED (AIAL)

4.12. Auckland International Airport Limited (AIAL) was incorporated on 1 April 1988 and is the owner and operator of the Auckland International Airport. Its shares trade on both the New Zealand and Australian stock exchanges. Substantial shareholders as at 18 August 2000 were Auckland City Council 25.8%, Manukau City Council 9.6%, Singapore Changi Airport 7.1%, and Colonial First State Investments 5.03%.

Operational Details

4.13. Auckland International Airport is New Zealand's largest and busiest airport for both domestic and international passengers and for air freight. Sixty per cent of passenger movements are international—much higher than at the other airports—accounting for 70% of New Zealand's international travellers. The airport operates 24 hours a day and is not subject to noise-based operational restrictions, although the Manukau City Council has required that AIAL offer to fund acoustic insulation to residents within the noise control boundary.

4.14. AIAL currently operates a single runway that can handle the largest international jets on maximum flight distances, in fact all current operating aircraft. Auckland's existing peak hour capacity is between 45 and 50 aircraft movements. Because of the number and broad mix of aircraft using Auckland, the airport experiences congestion at peak periods. AIAL, however, has limited ability to extend the length of the current runway, as it is bounded by water at either end. A second runway is proposed for the future, and, when and if a second runway becomes viable, it would expand the airport's capacity and ease peak hour congestion. Before then though, the existing runway needs rehabilitation and reconstruction.

4.15. Key operational statistics for the year ended 30 June 2000 are as follows:

---

[44] The Concise Oxford Dictionary, Clarendon Press, Oxford 1990.

[45] Ibid.

Size:	Land area (hectares)	1,600
	Runway length (metres)	3,635
	ICAO category	9
Aircraft Movements:	Domestic	95,732
	International	26,262
	Other (incl. GA)	25,774
	Total	147,769
Passenger Numbers:	Domestic	3,206,806
	International	4,799,236
	Total	8,006,042
Freight Volumes:	Domestic (tonnes)	36,588
	International (tonnes)	155,091
	Total	191,679
MCTOW Landed (tonnes)		4,505,896

Activities Undertaken

4.16. AIAL is largely a facilities provider—providing land or buildings which third parties operate their business from—with some exceptions.

4.17. AIAL provides a rescue fire service, meteorological services, and international apron management at the airport. The company also has one wholly-owned subsidiary, Waste Resources Limited, which operates the quarantine waste disposal facility at the airport. In addition, AIAL and its joint venture partner Host Marriott provide food and beverage services at the international terminal. AIAL has in recent years been investing in substantial commercial developments.

4.18. The company's assets include the runway, aprons, three terminal buildings, a substantial retail precinct, car parking, and commercial and office buildings. Both major domestic airlines—Air New Zealand (Air NZ) and the former Qantas New Zealand (Qantas NZ)—leased domestic terminal buildings from AIAL and handled the operation of the terminals themselves. The international terminal is shared by all the international airlines and contains a substantial shopping centre, with 55 shops operated as concessions by AIAL.

4.19. Air traffic control at Auckland is currently handled by Airways Corporation (Airways), which owns and maintains the navigation lighting and aids. Airways provide and bill the airlines directly for their air traffic control services. AIAL does not provide ground handling services at the airport, instead it is provided by third parties—principally by Air NZ and Ogden Aviation Services.

4.20. In total, AIAL owns 1600 hectares of land in and around the airport, approximately 689 hectares of which comprises the current airfield. Around 345 hectares of land is held for future development, AIAL has the opportunity to expand both its aeronautical and commercial operations, and has a sizeable commercial precinct at the airport.

Identified (and Other) Airport Activities and their Prices and Revenues

4.21. Having broadly outlined the activities undertaken by AIAL earlier in this chapter, these activities are classified and grouped in terms of the three identified airport activities (defined in the Airport Authorities Amendment Act) and an additional grouping headed "other airport activities".

4.22. Airfield activities at Auckland International Airport, and those undertaken by AIAL, are as follows:

Table 1
Airfield Activities at Auckland International Airport

Element of Activity	Undertaken by AIAL	Undertaken by Third Party	Assets owned by AIAL	Prices charged or revenue derived by AIAL
Airfields, runways, taxiways, and parking aprons for aircraft	Most.	Airways own and maintain runway and taxiway paint markings.	Land and land improvements (including drainage storm water, roads and other infrastructure – both airside and some apportionment for landside) associated with the main runway, taxiways, international apron, domestic apron, grassed areas and roads within the airfield or otherwise supporting it.	Aircraft landing charges. Sundry income from hay sales.
Facilities and services for air traffic control	AIAL leases land to Airways.	Provided by Airways, who own the Control Tower building, as well as owning, operating and maintaining navigational assets.	Land on which Airways' Control Tower sits.	Rent from land leased to Airways.
Facilities and services for parking apron control	AIAL provides apron control service at the international terminal apron.	Air NZ and Eagle Air provide apron control at the domestic apron on behalf of AIAL.	Land and buildings for the International Apron Tower, together with land for the Domestic Apron.	Terminal Services Charge (TSC).
Airfield associated lighting	AIAL has apron lights only.	Airways owns cables and light fittings for main taxiway and runway. It operates and maintains this airfield lighting as well as AIAL's assets.	Cable ducts and light pots for entire airfield; cabling for light fittings for aprons and first taxiway.	Aircraft landing charges.
Services to maintain and repair airfields, runways, taxiways, and parking aprons for aircraft	All.	None.	Runway maintenance equipment.	Aircraft landing charges.

Element of Activity	Undertaken by AIAL	Undertaken by Third Party	Assets owned by AIAL	Prices charged or revenue derived by AIAL
Rescue, fire, safety, and environmental hazard control services	All.	Airport Noise Committee (council, airlines, Airways and AIAL).	Land and buildings associated with the rescue fire service (Public Safety Response) as well as vehicles.	Rescue fire component of aircraft landing charges.
Airfield supervisory and security services	AIAL provides and maintains security fencing and leases space to Aviation Security Service (AVSEC).	AVSEC provides airside security, security between airside and landside, International passenger control, and perimeter patrols.	Security fencing and office space leased to AVSEC.	Rental from ground lease to AVSEC.
Facilities/ assets held for future activities	Holding of land.	None.	Land held for the second runway.	Rental from current users of land (e.g. farmers).

4.23. Aircraft and freight activities at Auckland International Airport, and those undertaken by AIAL, are as follows:

Table 2
Aircraft and Freight Activities at Auckland International Airport

Element of Activity	Undertaken by AIAL	Undertaken by Third Party	Assets owned by AIAL	Prices charged or revenue derived by AIAL
Hangars	AIAL leases land to some parties with hangars.	Air NZ, Great Barrier, St Johns Ambulance, Airworks, Skycare, NZ Post etc.	Land on which hangars are situated.	Ground and/or building rental.
Facilities and services for refuelling of aircraft	Provision of pipeline and access to the airfield.	Refuelling undertaken by fuel companies.	Pipeline running onto the international apron.	Charge for use of pipeline and access to airfield.
Facilities and services for flight catering	AIAL provides access to the airfield.	Provided Caterair directly to airlines.	Land leases.	Rent.
Facilities and services for waste disposal	Provision of bins for collection of rubbish around the airport and terminals. Owns and operates the quarantine waste disposal and honeypot facility at the airport.	Collection and removal of waste through AIAL agent Onyx and third party carriers.	Rubbish bins. Owns and operates on-airport quarantine incineration facility and honeypot.	Incineration fees for airside and landside waste.
Facilities and services for the storing of freight	Freight buildings leased to Air NZ.	Air NZ (container park).	Land and buildings, namely container park adjacent to international apron and freight building at domestic.	Rent.

Element of Activity	Undertaken by AIAL	Undertaken by Third Party	Assets owned by AIAL	Prices charged or revenue derived by AIAL
Security services for freight	None.	Airside security provided by AVSEC and airport security provided by NZ Police.	None.	None.
Customs services for freight	None.	Provided by NZ Customs.	None.	None.
Quarantine services for freight	None.	Provided by MAF.	None.	None.
Facilities/ assets held for future activities	Holding of land.	None.	Land.	Rental from current users of land (e.g. farmers).
Other				
(1) Stock handling	AIAL provides land where stock can be handled.	Airlines or freight operators handle stock.	Stock handling area.	Fees for use of stock handling area.
(2) Ground handling facilities	Land and buildings leased to ground handling operators.	Undertaken by Air NZ, Sky Care and Ogden Aviation Services. Each own their own tarmac equipment. Ogdens own their building.	Land and buildings.	Rent.

4.24. Specified passenger terminal activities at Auckland International Airport, and those undertaken by AIAL, are as follows:

Table 3
Specified Passenger Terminal Activities at Auckland International Airport

Element of Activity	Undertaken by AIAL	Undertaken by Third Party	Assets owned by AIAL	Prices charged or revenue derived by AIAL
Passenger seating areas, thoroughfares	Provision of seating in gate lounges and other public areas in ITB (International Terminal Building) and in the DTBs	None.	Seating in public areas of ITB and domestic terminals (DTBs). Space for airline lounges.	For ITB - TSC and Airport Development Charge (ADC); For DTB – Rentals. Also rent from airline lounge space.
Airbridges	Provided by AIAL at ITB.	Provided by Air NZ at their DTB. Mobile stairs provided by airlines or ground handlers.	Airbridges at ITB.	TSC and portion of ADC.
Flight information and public address systems	Provided by AIAL, except at DTBs.	Air NZ provide at their DTB.	FIDS and PA systems at ITB.	TSC and portion of ADC.

Element of Activity	Undertaken by AIAL	Undertaken by Third Party	Assets owned by AIAL	Prices charged or revenue derived by AIAL
Facilities and services for the operation of customs	Office space leased to NZ Customs. AIAL provides public space in ITB.	Provided by NZ Customs.	Furniture and fittings in public areas of ITB, as well as office space.	Rent for office space, TSC and portion of ADC for public facilities.
Facilities and services for the operation of immigration	Office space leased to NZ Immigration. AIAL provides public space in ITB.	Provided by NZ Immigration.	Furniture and fittings in public areas of ITB, as well as office space.	Rent for office space, TSC and portion of ADC for public facilities.
Facilities and services for the operation of quarantine checks and control	Office space leased to MAF. AIAL provides public space in ITB.	Provided by MAF.	Furniture and fittings in public areas of ITB, as well as office space.	Rent for office space, TSC and portion of ADC for public facilities.
Facilities for the collection of duty-free items	Collection facility is operated by AIAL for off-airport and non-DFS/Regency sales.	DFS and Regency provide their own collection facilities.	Furniture and fittings and counter and storage space.	Licence fees.
Facilities and services for the operation of security	Space leased to AVSEC.	AVSEC provides security between airside and landside, and screening of hand baggage.	Space leased to AVSEC.	Rent for office space, TSC and portion of ADC for public facilities.
Facilities and services for the operation of Police services	Space leased to NZ Police.	Provided by NZ Police.	Space leased to NZ Police in ITB.	Rent for office space, TSC and portion of ADC for public facilities.
Passenger check-in areas	Space leased, and furniture and fittings provided, to airlines.	Check-in services provided by Airlines. Air NZ own their furniture and fittings.	Check-in counters at ITB ground floor check-in for all airlines except Air NZ premier check-in..	Counter rental and portions of both ADC and TSC.
Baggage handling	Provision of fixed outbound and inbound baggage systems at the ITB.	Provided by Air NZ, Ogdens and Skycare. Air NZ own inbound and outbound baggage make-up systems at the their DTB.	ITB outbound baggage system (feeder conveyor and scales, collector conveyors, and sortation conveyors) and inbound luggage carousels; plus conveyers at DTBs. AIAL also provide lost baggage areas.	TSC and portions of ADC.
Facilities/ assets held for future activities	Holding of land.	None.	Land.	Rental from current users of land (e.g. farmers).

4.25. Other airport activities at Auckland International Airport, and those undertaken by AIAL, are as follows:

Table 4
Other Airport Activities at Auckland International Airport

Activity	Undertaken by AIAL	Undertaken by Third Party	Assets owned by AIAL	Prices charged or revenue derived by AIAL
Utilities (electricity, telecommunications, water etc)	AIAL provides the infrastructure and also supplies some services. Owns and operates electricity network, providing access to retailers. Owns and operates stand-by generators in the case of an emergency or when there is a fault on supply or network.	Electricity retailers supply electricity to AIAL and other parties operating at airport. Landis and Staefa NZ manage environment at ITB. Gas by Contact.	Infrastructure, including stand-by generators, electricity network at airport (underground cable, power centres and building cabling) that connects with the network of Vector at the airport boundary.	Electricity retailers pay a tariff to use electricity network pursuant to use of systems agreements negotiated with AIAL.
Roading	Provision of roads within airport (on AIAL land).	Manukau City Council provides adjoining roads.	Roads.	Portion of ADC.
Car parking	AIAL provides some parking facilities.	Public and staff car parks are managed under contract by Parking Services International Limited. On and off airport carparks, Skycare, Skyway Garage, Koru Valet parking and other valet parking, local hotel parking and tenancy parking.	Land and parking facilities.	Public and staff parking charges and rent from leased car parks.
Commercial property portfolio	AIAL leases out land and buildings (offices and warehousing) landside to various aviation and non-aviation related businesses, in addition to space in terminal buildings.	Some sub-leasing.	Land and buildings.	Rent.
Food and beverages	50/50 Joint venture with HMSC Host and AIAL Limited at ITB.	HMSC Host and Kiwi Discovery.	ITB facilities.	Share of joint venture profits with HMSC Host in ITB.
Office space	Provide office space in terminal buildings.	None.	Terminal space.	Rent.

Activity	Undertaken by AIAL	Undertaken by Third Party	Assets owned by AIAL	Prices charged or revenue derived by AIAL
Conference facilities	Provision of media centre and other conference facilities for hire in the terminals.	None.	Terminal space and facilities.	Rent.
Concessions	Offer concessions to third parties around and within the terminals for the following: • Retail shops. • Duty-free shops. • Food and beverages. • Rental cars. • Banking and money exchange services.	Third parties operate concessions around and within the terminals.	Terminal space and facilities.	Rate for each concession is calculated on the basis of the greater of a minimum base rental amount and a percentage (e.g. 25%) of the concession's gross turnover i.e. pay base amount and where turnover exceeds a set level, pay a percentage of surplus turnover to AIAL.
Information	Customer service officers (red coats) and hospitality ambassadors (blue coats).	Some airlines have their own customer service desks.	Terminal space and furniture.	Portion of ADC.
Public space and facilities in terminals	All. Some are free services and others incur at a charge.	None.	Terminal space and facilities. In the ITB this includes a chapel, a theatrette, reading/writing areas, smoking lounges, first aid, children's play areas, nurseries, an exercycle, day rooms, and showers.	In transit area of ITB, day rooms are available for hire as well as showers, towels, soap, and hairdryers. Luggage storage is also available. Costs of free facilities recovered from portion of ADC.
Passenger vehicle operators	Provide facilities and space for taxis, buses, shuttle operators.	Bus, taxi and shuttle service operators.	Facilities and land for taxis, buses, shuttles, valet parking etc.	Licence fees and fees per pick-up.
Consultancy services	AIAL offers training, consultancy and project management on all airport disciplines.	None.	None.	Consultancy income.
Trolley Services.	Management contract to Smart Cart.	None.	Trolleys.	Portion of ADC.

4.26. Any airfield activities provided by third parties are still undertaken on-airport (and on airport company land). In limited instances, third parties provide other activities from an off-airport location. Examples include rental cars, car parking (airline valet and long-term), airline catering, freight facilities, waste disposal. However, while these businesses may operate from premises off-airport, they need to obtain access to the airport in order to pick-up or drop-off customers or goods. While these entities may avoid paying rent to the airport company for a site on-airport, they typically pay fees to access the airport instead.

Airfield (Landing) Charges

4.27. AIAL's revenue from airfield activities is principally derived from landing charges. Landing charges are levied on aircraft operators based aircraft weight. In addition, AIAL charges non-scheduled flights (itinerants) a *parking charge* that park for more than six hours.

4.28. Since corporatisation, landing charges have been changed seven times. In 1992, the international charges for the over 40,000 kg class rose 3% to assist with the development of the international terminal building (ITB). Upon completion of the ITB, they were reduced by 3%. 1997 saw an increase in both domestic and international landing charges for small aircraft. Effective 1 September 2000, AIAL increased all its landing charges by 8.5%. AIAL has also determined that landing charges will further increase by another 5% in each of the next 2 years.

4.29. The new landing charges effective 1 September 2000 are an outcome of consultation between AIAL and its substantial customers as required by the Airport Authorities Amendment Act 1997. Table 5 summarises AIAL's proposals and decision on charges.

Table 5
AIAL Consultation Proposals

		2000	2001	2002
29/10/99	Proposal	25.09%	5.74%	4.71%
21/12/99	Proposal	33.88%	3.59%	2.61%
7/4/00	Proposal	24.73%	4.90%	4.82%
17/5/00	Proposal	18.14%	5.26%	4.71%
22/8/00	**Decision**	**8.50%**	**5.00%**	**5.00%**

4.30. Landing charges since corporatisation are summarised in the table 6:

Table 6
AIAL Landing Charges

		Charge Effective From						
MCTOW	**# Landings**	**1/07/88**	**1/11/88**	**1/04/90**	**1/04/92**	**1/07/96**	**1/07/97**	**1/09/00**
<1.5 tonnes	< 25	$5.00/L	$ 5.00/L	$ 8.89/L	$ 9.16/L	$ 9.16/L	$25.00/L	$27.13/L
	≥ 25	$5.00/L	$ 5.00/L	$ 8.89/L	$ 9.16/L	$ 9.16/L	$12.50/L	$13.56/L
1.5-3 tonnes	< 25	$5.00/L	$10.00/L	$ 8.89/L	$ 9.16/L	$ 9.16/L	$25.00/L	$27.13/L
	≥ 25	$5.00/L	$10.00/L	$ 8.89/L	$ 9.16/L	$ 9.16/L	$12.50/L	$13.56/L
3-6 tonnes	< 25	$9.00/T	$ 4.00/T	$ 4.20/T	$ 4.30/T	$ 4.30/T	$25.00/L	$27.13/L
	≥ 25	$9.00/T	$ 4.00/T	$ 4.20/T	$ 4.30/T	$ 4.30/T	$ 4.30/T	$ 4.70/T
6-40 tonnes	all	$9.00/T	$ 6.00/T	$ 6.30/T	$ 6.50/T	$ 6.50/T	$ 6.50/T	$ 7.10/T
40+ tonnes	all	$9.00/T	$10.00/T	$10.50/T	$10.80/T	$10.50/T	$10.50/T	$11.40/T

Landing charges for aircraft under 3 tonnes and between 3 and 6 tonnes with less than 25 movements per month are a dollar charge per landing, not a charge per tonne. Note that the 1/7/88 domestic charges for aircraft over 3 tonne were 5.65% Revenue. Domestic 40+ tonne charge in 1996 and 1997 unchanged – still 0.0108. 2000 charge 0.0117.

Acquirers of Airfield Activities

4.31. The acquirers of airfield activities supplied by AIAL include the following:

Table 7
Acquirers of Airfield Activities Supplied by AIAL

Class or Grouping	User
Direct Acquirers: Aircraft operators	• International - Aerolineas Argentinas, Air New Zealand, Air Pacific, Air Tahiti Nui, Air Vanuatu, Aircalin, Canada 3000, Cathay Pacific Airways, China Airlines, EVA Airways, Garuda Indonesia, Korean Air, Malaysia Airlines, Polynesian Airlines, Qantas Airways, Royal Tongan Airlines, Singapore Airlines, Thai Airways International, United Airlines • Domestic – Air New Zealand, Freedom Air, Origin Pacific Airways, Qantas Airways • Commuter – Air National, Great Barrier Airlines, Mountain Air, Eagle Air, Mount Cook Airlines • Cargo Only – Airfreight NZ, Airwork, Ansett Airfreight, DHL, Emery Worldwide, Federal Express • General Aviation and Auckland Helicopter Trust
Direct Acquirers: Other	Airways Corporation, Aviation Security Service (AVSEC)
Indirect Acquirers	Aircraft passengers, persons sending freight by aircraft

4.32. AIAL's substantial customers, in their own right, are Air NZ, Qantas Airways, Singapore Airlines, and United Airlines.

WELLINGTON INTERNATIONAL AIRPORT LIMITED (WIAL)

4.33. Wellington International Airport Limited (WIAL) was incorporated on 16 October 1990. The airport company is majority owned (66%) by Infrastructure and Utilities NZ Limited (Infratil NZ), with the Wellington City Council owning the other 34%.

Operational Details

4.34. Wellington International Airport is the third largest airport in New Zealand and the smallest of the three subject airports. It classifies itself as a regional hub, servicing New Zealand and international flights to the eastern seaboard of Australia and island nations in the south-west Pacific. Approximately 90% of Wellington's passengers travel domestically, and a high proportion are business people. The airport has in recent years experienced competition from Palmerston North Airport in respect of Trans-Tasman traffic, due to Freedom Air operating out of Palmerston North.

4.35. The airport is located on a cramped isthmus site, which makes physical expansion of facilities difficult and expensive. The runway length, at just under 2000 metres, is relatively short for an international airport and it is bounded by water at both ends. Capacity is also limited by airspace problems due the surrounding hills. This imposes limits on aircraft operations, precluding the use of B747 aircraft, and restricting the range that can be achieved with smaller aircraft types to destinations in Australia and some Pacific Islands. Its location close to residential areas has resulted in noise abatement requirements which include restrictions on the aircraft types which may operate, and the imposition of a night curfew. The airport also gets congested at peak periods, especially in adverse weather.

4.36. Key operational statistics for the year ended 31 March 2001 are as follows:

Size:	Land area (hectares)	105
	Runway length (metres)	1,935
	ICAO category	7
Aircraft Movements:	Domestic	107,618
	International	5,118
	Other (incl. GA)	12,616
	Total	122,352
Passenger Numbers:	Domestic	3,199,000
	International	470,000
	Total	3,699,000
MCTOW Landed (tonnes - 31 March 2000 figure)		1,274,078

4.37. Freight statistics are not available for Wellington International Airport.

Activities Undertaken

4.38. WIAL's business is focused on the provision of airport facilities by providing aerodrome facilities and services, property, roading, car parking, information services and service utilities to the various airlines and other airport users. Whilst largely a facilities provider, WIAL also provides a rescue fire service and public car parking at the airport. WIAL aims to contracts out services wherever there are cost reductions to be made.

4.39. The company's assets include a single runway, aprons, the terminal building, car parking and other ancillary buildings. In recent years, WIAL has constructed a multi-user integrated terminal used by all airlines—domestic and international—and demolished the old Air NZ domestic terminal.

4.40. Air traffic control is currently provided by Airways, which has its own control tower located off the airport in a residential street. Airways provide and bill the airlines directly for their air traffic control services. WIAL does not provide ground handling services at the airport, such services are provided by the airlines.

4.41. Geographical limitations mean that there is very limited land at airport, constraining both current operations and opportunities for further development. Of the 105 hectares of land owned, 95 hectares is the airfield, with some land held for future development. There is limited opportunity to extend the runway as it is bound by water at each end—to extend it would require reclaiming substantial amounts of land.

Identified (and Other) Airport Activities and their Prices and Revenues

4.42. Having broadly outlined the activities undertaken by WIAL earlier in this chapter, these activities are classified and grouped in terms of the three identified airport activities as well as other airport activities. This detail is based on information supplied by both WIAL and its users.

4.43. Airfield activities at Wellington International Airport, and those undertaken by WIAL, are as follows:

Table 8
Airfield Activities at Wellington International Airport

Element of Activity	Undertaken by WIAL	Undertaken by Third Party	Assets owned by WIAL	Prices charged or revenue derived by WIAL
Airfields, runways, taxiways, and parking aprons for aircraft	All.	None.	Land and land improvements to runway, taxiways, aprons and grassed areas.	Landing charges (except rescue fire component).
Facilities and services for air traffic control	None.	Airways provide all air traffic control from an off-airport site.	None.	None.
Facilities and services for parking apron control	Partly by WIAL.	Undertaken by airlines.	Apron supervision vehicles.	None.
Airfield associated lighting	Some facilities provided by WIAL.	Airways own all lighting and navigation aids.	WIAL owns stand lighting and Nose in Guidance units.	Component of landing charges.
Services to maintain and repair airfields, runways, taxiways, and parking aprons for aircraft	Contracted out by WIAL.	Major maintenance undertaken by outside contractors with supervision by airport.	None.	Component of landing charges.
Rescue, fire, safety, and environmental hazard control services	Provision of rescue fire service and airside services team. The airside services team monitor the safety of the apron, conduct runway checks, co-ordinate airside works, look after bird and hazard control, and monitor airside rules.	Airport Noise Committee (council, airlines, Airways and WIAL).	Land and buildings, vehicles and equipment, and noise monitoring system.	Rescue fire component of landing charges.
Airfield supervisory and security services	Provision and maintenance of security fencing, perimeter patrols, and management of systems.	AVSEC provides airside security, security between airside and landside, and international passenger screening.	Security fencing, access control system, and CCTV monitors.	Component of landing charges.
Facilities/ assets held for future activities	Residential properties bordering airfield (for resource management).	None.	Residential properties bordering airfield.	Rent from residential properties.

4.44. Aircraft and freight activities at Wellington International Airport, and that undertaken by WIAL, are as follows:

Table 9
Aircraft and Freight Activities at Wellington International Airport

Element of Activity	Undertaken by WIAL	Undertaken by Third Party	Assets owned by WIAL	Prices charged or revenue derived by WIAL
Hangars	Provision of land and buildings.	Air NZ and GA hangers.	Rex hangar, Gibson hangar, and Westside 1 hangar.	Rent.
Facilities and services for refuelling of aircraft	Provision of land and access to airfield.	Mobil & BP have a joint facility (JUFF) with underground hydrants. Shell supplies fuel by tanker or through JUFF.	Land.	Rent.
Facilities and services for flight catering	Provision of land and access to airfield.	Provided by Air NZ flight Kitchen (on-airport).	Land for Air NZ flight kitchen.	Rent.
Facilities and services for waste disposal	Provision of land.	Medical Waste provide facilities for quarantine waste.	Effluent disposal facility for domestic operations.	None. Airlines pay for service direct.
Facilities and services for the storing of freight	Provision of land.	Freight buildings provided by Air NZ, and NZ Post.	Land for international cargo building.	Rent.
Security services for freight	Provision of terminal space.	Airside security provided by AVSEC and airport security provided by Police.	Spaced leased to AVSEC and NZ Police.	Rent.
Customs services for freight	Provision of terminal space.	Provided by NZ Customs.	Space leased to NZ Customs.	Rent.
Quarantine services for freight	Provision of terminal space.	Provided by MAF.	Space leased to MAF.	Rent.
Facilities/ assets held for future activities	Land.	None.	Land.	None.
Other Ground handling	WIAL provides ground maintenance vehicles and access to airfield.	Undertaken by Sky Care, Aviation Ground Services, Airlines, and Capital Jet Services who own their own mobile plant.	Ground maintenance vehicles.	None.

4.45. Specified passenger terminal activities at Wellington International Airport, and those undertaken by WIAL, are as follows:

Table 10
Specified Passenger Terminal Activities at Wellington International Airport

Element of Activity	Undertaken by WIAL	Undertaken by Third Party	Assets owned by WIAL	Prices charged or revenue derived by WIAL
Passenger seating areas, thoroughfares	Provides public areas in terminal.	RNZAF and Aero Club.	Land and terminal building, plus furniture in common areas.	Terminal services charge (TSC) and international passenger departure charge.
Airbridges	All.	None, although the airlines provide mobile stairs.	Airbridges.	TSC.
Flight information and public address systems	Information systems.	Airlines provide source data.	Public FIDS screens, hardware and software for terminal.	TSC.
Facilities and services for the operation of customs	Space leased to NZ Customs.	Provided by NZ Customs.	Statutory space.	Rent for sole use space.
Facilities and services for the operation of immigration	Space leased to Immigration.	Provided by Immigration.	Statutory space.	Rent for sole use space.
Facilities and services for the operation of quarantine checks and control	Space leased to MAF.	Provided by MAF.	Statutory space.	Rent for sole use space.
Facilities for the collection of duty-free items	Space leased for collection of duty-free.	Duty Free Stores	Terminal Space	Rent for sole use space.
Facilities and services for the operation of security	Space leased to AVSEC.	AVSEC provide security between airside and landside, and international passenger screening.	Common use space used for this purpose. Security cameras and access control system.	Rent for sole use space.
Facilities and services for the operation of Police services	Space leased to NZ Police.	Provided by NZ Police.	Terminal space.	Rent for sole use space.
Passenger check-in areas	Provide airline check-in areas.	Check-in services provided by Airlines.	Check-in counters.	Rent for check-in counters.
Baggage Handling	Provide baggage handling system.	Operated by airlines.	Baggage handling system.	Costs recovered from airlines.
Facilities/ assets held for future activities	Land.	None.	Land.	None.

4.46. Other airport activities at Wellington International Airport, and those undertaken by WIAL, are as follows:

Table 11
Other Airport Activities at Wellington International Airport

Activity	Undertaken by WIAL	Undertaken by Third Party	Assets owned by WIAL	Prices charged or revenue derived by WIAL
Utilities (electricity, telecommunications, water etc)	WIAL provides some infrastructure and also supplies some services.	Wellington City Council owns drainage and sewerage lines. HV network and gas lines owned United Networks.	Some infrastructure and utility services. WIAL owns electricity cables within the terminal building.	Some electricity, telecommunications and other utility costs are on-charged to tenants. Some tenants also directly billed by suppliers at tenants option.
Roading	WIAL provides internal roads and road access links.	Wellington City Council provides adjacent public roads.	Roads.	Costs recovered from various airport activities.
Car parking	WIAL provides all parking facilities and at airport.	Car parks are managed under contract by Condrens Car Parks International Limited.	Land and parking facilities	Public and staff parking charges (less costs to have operation contracted out).
Commercial property portfolio	WIAL leases out land and buildings landside to various aviation and non-aviation related businesses.	None.	Land and buildings.	Rent.
Office space	Provide office space in terminal buildings.	None.	Terminal space.	Rent.
Conference facilities	Conference facilities for hire in terminal.	Some facilities in airline club lounges.	Terminal space and facilities.	Rent.
Concessions	Offer concessions to third parties around and within the terminals for the following: • Retail shops. • Duty-free shops. • Food and beverages. • Rental cars. • Banking and money exchange services.	Third parties operate concessions around and within the terminals.	Terminal space and facilities.	Rate for each concession is calculated on the basis of the greater of a minimum base rental amount and a percentage (e.g. 25%) of the concession's gross turnover i.e. pay base amount and where turnover exceeds a set level, pay a percentage of surplus turnover to WIAL.
Information	Provide airport information desk and airport service officers who provide assistance and customer service to airport users.	Some airlines have their own customer service desks.	Terminal space and furniture.	Costs recovered from specified terminal activities.

Activity	Undertaken by WIAL	Undertaken by Third Party	Assets owned by WIAL	Prices charged or revenue derived by WIAL
Public space and facilities in terminals	All. The terminal services team maintain buildings, plant and equipment. They also run the operations centre and systems, co-ordinating on-airport communications.	None.	Terminal space and facilities.	Costs recovered from specified terminal activities.
Passenger vehicle operators	Provide facilities and space for taxis, buses, shuttles, valet parking etc; tendering out rights to operate some services.	Successful tenders operate pick-up bus, taxi and shuttle services, unlimited operators undertake drop-off services. Airlines operate valet parking services.	Facilities and land for taxis, buses, shuttles, valet parking etc.	Licence fees and fees per pick-up.

4.47. Airfield activities provided by third parties tend to be undertaken on-aiport (and on airport company land). However, Airways Corporation provide the bulk of their air traffic control service from an off-airport location. Also, in limited instances, third parties provide other activities from an off-airport location. Examples include rental cars, car parking (airline valet and long-term), airline catering, freight facilities, waste disposal. However, while these businesses may operate from premises off-airport, they need to obtain access to the airport in order to pick-up or drop-off customers or goods. While these entities may avoid paying rent to the airport company for a site on-airport, they typically pay fees to access the airport instead.

Airfield (Landing) Charges

4.48. WIAL's revenue from airfield activities is principally derived from landing charges. Landing charges are levied on aircraft operators based aircraft weight. In addition, WIAL—like AIAL—charges non-scheduled flights (itinerants) a *parking charge* that park for more than six hours.

4.49. On 1 January 1991, new airport charges were introduced. Landing charges were further increased on 1 July 1992 and again by 5% on 1 May 1997. The change in charges in 1997 was based on a deed entered into with the major airline users (Air New Zealand, Qantas, Ansett New Zealand, Air Pacific, Polynesian Airlines). Changes in charges since 1997 have been in accordance with the deed.

4.50. Since corporatisation, all weight bands have experienced increased charges, typically with increases in charges being the highest for the smaller aircraft. Landing charges since corporatisation are summarised in table 12:

Table 12
WIAL Landing Charges

	Charge Effective From				
MCTOW	**1/01/91**	**1/07/92**	**1/05/97**	**1/04/99**	**1/07/00**
<2 tonnes	$8.80/T	$ 8.80/T	$ 8.80/T	$12.50/L[46]	$12.50/L
2-3 tonnes	$3.33/T	$ 8.80/T	$ 8.80/T	$ 6.17/T	$ 6.17/T
3-15 tonnes	$3.33/T	$ 5.87/T	$ 6.17/T	$ 6.17/T	$ 6.17/T
15-30 tonnes	$3.33/T	$ 5.87/T	$ 6.17/T	$ 6.17/T	$ 6.17/T
30+ tonnes	$8.21/T	$11.55/T	$12.13/T	$ 12.13/T	$12.59/T

4.51. WIAL is to commence consultation with the airlines in July 2001, in order to set charges from 1 July 2002.

Acquirers of Airfield Activities

4.52. The acquirers of airfield activities supplied by WIAL include the following:

Table 13
Acquirers of Airfield Activities Supplied by WIAL

Class or Grouping	User
Direct Acquirers: Aircraft operators	• International - Air New Zealand, Air Pacific, Qantas Airways • Domestic - Air New Zealand, Freedom Air, Origin Pacific Airways, Qantas Airways, Mount Cook Airlines • Commuter – Air Chathams, Air Nelson, Eagle Airways, Soundsair, Wanganui Commuter Air • Cargo Only – Airpost, Airwork, Flight Corporation, Yellow Fin Holdings • General Aviation – Capital Jet Services, Wellington Aero Club, Wellington Aviation • Other – RNZAF, Life Flight Operations
Direct Acquirers: Other	Airways Corporation, Aviation Security Service (AVSEC)
Indirect Acquirers	Aircraft passengers, persons sending freight by aircraft

4.53. WIAL's substantial customers, in their own right, are Air NZ and Qantas Airways.

CHRISTCHURCH INTERNATIONAL AIRPORT LIMITED (CIAL)

4.54. Christchurch International Airport Limited (CIAL) was incorporated on 1 July 1988, with 75% of shares held by Christchurch City Council and 25% by the Crown. The Crown has indicated its desire to sell it shareholding. The Christchurch City Council and Ngai Tahu have first option to purchase the Crown's shares.

Operational Details

4.55. Christchurch is the largest airport in the South Island and the second largest in New Zealand. It markets itself as the gateway for inbound tourists to the South Island. Currently about 17% of New Zealand's international visitors enter the country via

[46] Note that landing charges for aircraft under 2 tonne (and 2-3 tonne until 1/4/99) are actual landing charge per landing, not on a tonne basis.

Christchurch. Approximately 75% of passenger movements at Christchurch are domestic. International flights are limited only by demand of passengers in preferring Christchurch as a destination.

4.56. Like Auckland, Christchurch Airport is able to handle the largest aircraft types currently in operation. It has two intersecting runways, the shorter of which is used for aircraft up to B767 size when the wind direction is unfavourable for the main runway (about 7% of the time). Like Auckland, the airport operates 24 hours a day with no curfew or restrictions on noise, apart from the hours during which engine testing can be undertaken. Christchurch does not appear to suffer from airfield congestion.

4.57. Key operational statistics for the year ended 30 June 2000 are as follows:

Size:	Land area (hectares)	750
	Runway length (metres):	
	• Main Runway	3,287
	• Cross Runway	1,741
	ICAO category	8
Aircraft Movements:	Domestic	61,554
	International	7,338
	Other (incl. GA)	86,228
	Total	155,120
Passenger Numbers:	Domestic	3,017,888
	International	1,066,495
	Total	4,084,383
Freight Volumes:	International (tonnes)	38,125
MCTOW Landed (tonnes)		2,175,209

4.58. Domestic freight statistics are not available for Christchurch International Airport.

Activities Undertaken

4.59. CIAL operates predominantly in the business of providing airport facilities and services to airline and airport users, but continues to diversify its revenue base by focusing on investments and land holdings. Christchurch Airport offers significant technical input on site, with three major airlines having maintenance bases at the airport. In addition, CIAL owns the waste disposal facility at the airport, contracting the operations out to the Medical Waste Group.

4.60. The company's assets include the two runways, aprons, the terminal building, car parking, and other ancillary land and buildings. The terminal building is essentially three buildings together, as there have been distinct areas for the two main domestic airlines (Air NZ and the former Qantas NZ) and for the international operations. CIAL is planning developments to the domestic terminal area in the near future, creating a multi-user domestic terminal.

4.61. Air traffic control at Christchurch is currently undertaken by Airways Corporation (Airways). A number of other services, such as ground handling, are provided by other third parties.

4.62. A notable feature of CIAL is its role as a base through which the Antarctica research programmes of certain countries are supplied. This began in 1955 with the US, and today includes New Zealand, the US and Italy. As part of the Antarctic theme, the airport operates a tourist facility—the Antarctic Visitor Centre.

4.63. A reasonable area of land is owned by CIAL, enabling it to have a commercial precinct at the airport. The company currently owns around 750 hectares of land, 550 hectares of which is the present airfield. In addition, there is plenty of flat farm land surrounding the airport—some owned by CIAL—that could be used for further development. Christchurch is the only one of the three airports that has the ability to relatively easily extend the length of its current runway.

Identified (and Other) Airport Activities and their Prices and Revenues

4.64. Having broadly outlined the activities undertaken by CIAL earlier in this chapter, these activities are classified and grouped in terms of the three identified airport activities as well as other airport activities. This detail is based on information supplied by both CIAL and its users.

4.65. Airfield activities at Christchurch International Airport, and those undertaken by CIAL, are as follows:

Table 14
Airfield Activities at Christchurch International Airport

Element of Activity	Undertaken by CIAL	Undertaken by Third Party	Assets owned by CIAL	Prices charged or revenue derived by CIAL
Airfields, runways, taxiways, and parking aprons for aircraft	All land and sealed surfaces except those undertaken by third parties.	Aprons provided by Air NZ and NZ Post (part only).	All land and all sealed surfaces except those undertaken by third parties.	Landing charge and rent.
Facilities and services for air traffic control	Provision of Control Tower.	All air traffic control provided by Airways.	Airways office space and control tower.	Rent.
Facilities and services parking apron control	None.	Air NZ allocates gates for all flights.	None.	None.
Airfield associated lighting	Apron flood lighting.	Airfield lighting provided by Airways.	Apron flood lighting.	Landing charge.

Element of Activity	Undertaken by CIAL	Undertaken by Third Party	Assets owned by CIAL	Prices charged or revenue derived by CIAL
Services to maintain and repair airfields, runways, taxiways, and parking aprons for aircraft	Grass moving, pavement sweeping, and patching. Provide 24 hour, 7 days a week maintenance service for all airport facilities, grounds and surfaces.	Contractors used for major maintenance e.g. resealing and pavement rehabilitation	Maintenance yard land, buildings plant and machinery.	Landing charge.
Rescue, fire, safety, and environmental hazard control services	All.	None.	Land, buildings, equipment and vehicles relating to rescue fire service.	Rescue fire component of landing charge.
Airfield supervisory and security services	Provision and maintenance of security fencing and perimeter patrols.	AVSEC provides airside security, security between airside and landside, and international passenger control.	Security fencing.	Landing charge.
Facilities/ assets held for future activities	Holding of Land.	None.	Land.	Rental from current users of land (e.g. farmers).

4.66. Aircraft and freight activities at Christchurch International Airport, and those undertaken by CIAL, are as follows:

Table 15
Aircraft and Freight Activities at Christchurch International Airport

Element of Activity	Undertaken by CIAL	Undertaken by Third Party	Assets owned by CIAL	Prices charged or revenue derived by CIAL
Hangars	Provide old Qantas NZ Heavy Maintenance Hanger No. 2 and land for other hangars.	Hangers are provided by Air NZ and the US National Guard.	Old Qantas NZ Heavy Maintenance Hanger No. 2 and land for other hangars.	Rent.
Facilities and services for refuelling of aircraft	Land.	Oil companies own all refuelling facilities including pipes and other fixtures.	Land.	Rent.
Facilities and services for flight catering	Provide Air NZ Flight Kitchen facilities on Wairaki Road.	Air NZ provide their own catering services.	Air NZ Flight Kitchen on Wairaki Road.	Rent.
Facilities and services for waste disposal	Waste Disposal Facility.	Waste Disposal contracted out to Medical Waste Group.	Waste Disposal Facility.	Quarantine centre component of terminal charge.
Facilities and services for the storing of freight	Land and landside freight forwarding facilities leased to operators.	Airlines own some hangers and some freight buildings.	Land and landside freight forwarding facilities.	Rent.

Element of Activity	Undertaken by CIAL	Undertaken by Third Party	Assets owned by CIAL	Prices charged or revenue derived by CIAL
Security services for freight	Space leased to AVSEC and NZ Police.	Airside security provided by AVSEC and airport security provided by Police.	Space leased to AVSEC and NZ Police.	Rent.
Customs services for freight	Space leased to NZ Customs.	Provided by NZ Customs.	Space occupied by NZ Customs.	Rent.
Quarantine services for freight	Space leased to MAF.	Provided by MAF.	Space occupied by MAF.	Rent.
Facilities/ assets held for future activities	Holding of Land.	None.	Land.	Rental from current users of land (e.g. farmers).
Other Ground handling	CIAL provides access to airfield.	Undertaken by Airlines, who own mobile plant.	Land.	Airfield component of landing charge.

4.67. Specified passenger terminal activities at Christchurch International Airport, and those undertaken by CIAL, are as follows:

Table 16
Specified Passenger Terminal Activities at Christchurch International Airport

Element of Activity	Undertaken by CIAL	Undertaken by Third Party	Assets owned by CIAL	Prices charged or revenue derived by CIAL
Passenger seating areas, thoroughfares	Terminal buildings and improvements. Own and manage public areas, including seating.	Improvements and fit-outs in the lounges are owned and provided by the airlines.	Terminal buildings and improvements, plus public areas, including seating.	Terminal charge and rent for airline lounges.
Airbridges	International air-bridges.	Air NZ own and operate the domestic air-bridges and also operate the international air-bridges. Mobile stairs provided by airlines.	International air-bridges.	Recovered as part of the terminal charge.
Flight information and public address systems	Own and maintain the FIDS in terminals.	Day-to-day operation of CIAL's system by airlines	FIDS in the terminals.	Recovered as part of the terminal charge.
Facilities and services for the operation of customs	Space leased to NZ Customs.	Provided by NZ Customs.	Space occupied by NZ Customs.	Rent paid on offices plus costs of arrivals and departures areas recovered as part of terminal charge.
Facilities and services for the operation of immigration	Space leased to Immigration.	Provided by Immigration.	Space occupied by Immigration.	Rent paid on offices plus costs of arrivals and departures areas recovered as part of terminal charge.

Element of Activity	Undertaken by CIAL	Undertaken by Third Party	Assets owned by CIAL	Prices charged or revenue derived by CIAL
Facilities and services for the operation of quarantine checks and control	Space leased to MAF.	Provided by MAF.	Space occupied by MAF	No rental paid on areas in arrivals hall or any office space. Costs recovered as part of terminal charge.
Facilities for the collection of duty-free items	Collection facility is operated by CIAL for off-airport and non-DFS Ltd sales.	DFS provide on-airport duty free shopping.	Space occupied by collection point.	Charge to retailers using the service.
Facilities and services for the operation of security	Space leased to AVSEC.	AVSEC provide security between airside and landside, and international passenger control.	Space occupied by AVSEC.	Rent.
Facilities and services for the operation of Police services	Space leased to NZ Police.	Provided by NZ Police.	Space occupied by NZ Police.	Rent.
Passenger check-in	Provide airline check-in areas.	Check-in services provided by Airlines.	Check-in counters.	Rent.
Baggage handling	Provide baggage handling system.	Operated by airlines.	Baggage handling system.	Costs recovered from airlines.
Facilities/ assets held for future activities	Holding of Land.	None.	Land.	Rental from current users of land (e.g. farmers).

4.68. Other airport activities at Christchurch International Airport, and those undertaken by CIAL, are as follows:

Table 17
Other Airport Activities at Christchurch International Airport

Activity	Undertaken by CIAL	Undertaken by Third Party	Assets owned by CIAL	Prices charged or revenue derived by CIAL
Utilities (electricity, telecommunications, water etc)	CIAL supplies electricity to some tenants at cost. Generates electricity for control period demand purposes to offset cost of imported energy. Provide water and sewerage.	Orion owns external electricity network at airport (overhead and underground power cables). Electricity retailers supply some tenants with power.	Some infrastructure and utility services, including stand-by electricity generators and electrical cabling in buildings.	Tenants who purchase electricity from third parties pay a delivery charge to access CIAL's "lines" in the terminal. Electricity supplied to other tenants at cost. Charges for water and sewerage.
Roading	CIAL provides internal roads and road access links.	Christchurch City Council provides adjacent public roads.	Roads.	Costs recovered from various airport activities.
Car parking	CIAL provides and operates all parking facilities and at airport.	None.	Land and parking facilities	Public and staff parking charges.

Activity	Undertaken by CIAL	Undertaken by Third Party	Assets owned by CIAL	Prices charged or revenue derived by CIAL
Commercial property portfolio	CIAL leases out land and buildings landside to various aviation and non-aviation related businesses.	None.	Land and buildings.	Rent.
Office space	Provide office space in terminal buildings.	None.	Terminal space.	Rent.
Conference facilities	Conference facilities for hire in terminal.	None.	Terminal space and facilities.	Rent.
Concessions	Offer concessions to third parties around and within the terminals for the following: • Retail shops. • Duty-free shops. • Food and beverages. • Rental cars. • Banking and money exchange services.	Third parties operate concessions around and within the terminals.	Terminal space and facilities.	Rate for each concession is calculated on the basis of the greater of a minimum base rental amount and a percentage of the concession's gross turnover i.e. pay base amount and where turnover exceeds a set level, pay a percentage of surplus turnover to CIAL.
Information	CIAL provides free customer services and travel and information centre.	Some airlines have their own customer service desks.	Terminal space and furniture.	Rent for space used by airlines.
Public space and facilities in terminals	All.	None.	Terminal space and facilities.	Terminal component of airport charges.
Passenger vehicle operators	Provide facilities and space for taxis, buses, shuttles, valet parking etc; tendering out rights to operate some services.	Successful tenders operate pick-up bus, taxi and shuttle services, unlimited operators undertake drop-off services. Airlines operate valet parking services.	Facilities and land for taxis, buses, shuttles, valet parking etc.	Licence fees and fees per pick-up.
Sheep farm	Land held for development or in respect of noise control is farmed.	Farm is operated by CIAL.	Land.	Farm revenue.

4.69. Any airfield activities provided by third parties are still undertaken on-aiport (and on airport company land). In limited instances, third parties provide other activities from an off-airport location. Examples include rental cars, car parking (airline valet and long-term), airline catering, freight facilities, waste disposal. However, while these businesses may operate from premises off-airport, they need to obtain access to the airport in order to pick-up or drop-off customers or goods. While these entities may

avoid paying rent to the airport company for a site on-airport, they typically pay fees to access the airport instead.

Airfield (Landing) Charges

4.70. CIAL's revenue from airfield activities is principally derived from landing charges. Landing charges are levied on aircraft operators based aircraft weight.

4.71. On 1 October 1988 CIAL introduced new airport charges for each specific aircraft type covering the costs of both aircraft landings and the terminal (although the portion relating to the airfield was easily identifiable). The charges were revised slightly a year later, and increased by an average of 2% on 1 June 1991 (for domestic aircraft only).

4.72. For almost 10 years, (from 1 June 1991 until 1 January 2001), CIAL's airport charges were held constant. On 1 January 2001, CIAL introduced new charges after lengthy consultation with substantial customers as required by the Airport Authorities Amendment Act 1997.[47] Charges have been set for three years. Table 18 summarises CIAL's proposals and decision on charges.

Table 18
CIAL Consultation Proposals

		< 3 tonnes	3-6 tonnes	6-30 tonnes	>30 tonnes
Dec 1999	Proposal	$ 6.00	$ 14.32	$ 5.93	$ 6.21
Oct 2000	Proposal	$ 6.00	$ 4.00	$ 6.04	$ 6.56
Dec 2000	**Decision**	**$ 6.00**	**$ 4.00**	**$ 5.61**	**$ 7.84**

4.73. The change in landing charges 1991 to 2001 is compared below:[48]

Table 19
CIAL Landing Charges

	Charge Effective From		
MCTOW	**Min 1/06/91**	**Max 1/06/91**	**1/01/01**
<3 tonnes	$8.05/T	$ 8.05/T	$6.00/T
3-6 tonnes	$5.29/T	$ 7.56/T	$4.00/T
6-30 tonnes	$3.08/T	$ 5.36/T	$5.61/T
30+ tonnes	$3.40/T	$11.59/T	$7.84/T

Acquirers of Airfield Activities

4.74. The acquirers of airfield activities supplied by CIAL include the following:

---

[47] Following CIAL announcing its new charges in late December 2000, discussions between BARNZ and CIAL resulted in the inputs into the airfield allocation algorithm being modified and the charges for the top two weight bands being slightly amended. In December, CIAL had proposed charges of $7.76 per tonne for aircraft 6-30 tonnes and $7.14 for aircraft over 30 tonnes.

[48] Because CIAL has restructured the way that it charges—from charges per individual aircraft to charges by weight breaks—minimum and maximum charges for each new weight break have been determined for the old charges.

Table 20
Acquirers of Airfield Activities Supplied by CIAL

Class or Grouping	User
Direct Acquirers: Aircraft operators	• International - Air New Zealand, Air Pacific, Qantas Airways, Singapore Airlines • Domestic - Air New Zealand, Freedom Air, Origin Pacific Airways, Qantas Airways, Mount Cook Airlines • Commuter – Air Chathams, Air Nelson, Air Safari, Eagle Airways • Cargo Only – Airpost, Asian Express Airlines, DHL, Emery Worldwide • General Aviation – Canterbury Aero Club • Other – US Navy, International Antarctic Programmes (US, Italian and NZ)
Direct Acquirers: Other	Airways Corporation, Aviation Security Service (AVSEC)
Indirect Acquirers	Aircraft passengers, persons sending freight by aircraft

4.75. CIAL's substantial customers, in their own right, are Air NZ, Mount Cook Airlines (an Air NZ subsidiary) and Qantas Airways.

CONCLUSION

4.76. The various airport activities are defined in the Airport Authorities Amendment Act to encompass the provision of both facilities and services. The tables provided above reveal that AIAL, WIAL and CIAL are mostly just facility providers and provide limited "services". The services provided by the subject airports include rescue fire, public carparking and terminal facilities. AIAL also provides apron traffic control, food and beverages in the international terminal building, and waste disposal services. The following services are not provided by the airport companies: flight catering, aircraft fuelling, air traffic control, ground handling, and retail stores.

4.77. However, in terms of this inquiry, it is necessary to determine the services supplied by AIAL, WIAL and CIAL, based on the definition of the term services contained in the Commerce Act. The Commerce Act defines "services" to include "any rights (including rights in relation to, and interests in, real or person property), benefits, privileges, or *facilities that are or are to be provided*, granted or conferred in trade". In terms of the Commerce Act, the provision of facilities and services are one and the same—both are services.

4.78. The next chapter of this report examines which (if any) of these services "are supplied or acquired in a market in which competition is limited or is likely to be lessened".

5. COMPETITION ANALYSIS

INTRODUCTION

5.1. Markets lie at the heart of a price control inquiry under the Commerce Act. The definition of the activities of airports set out in the Airport Authorities Amendment Act 1997 do not necessarily equate with the concept of markets used in the Commerce Act. The relationships between "airfield activities", which is the specific focus of the inquiry, and other activities undertaken at the airport, need to be taken into account in defining the market(s).

5.2. Many of the tests established in Commission decisions and court judgements under Parts 2 and 3 of the Commerce Act on issues of market definition and competition analysis are applicable to the analysis required by a price control inquiry. However, price control also presents its own unique challenges in terms of market definition and competition analysis. Particularly, because of the bundling of services that is often associated with monopolies, who are the usual targets of price control inquiries. Bundling may be a consequence of supply-side or demand-side conditions.

5.3. To thoroughly examine airfield activities, the Commission needs to have regard to the interrelationships between "airfield activities" and other airport activities. Consequently, it is intended here to canvas markets more widely than those involved in "airfield activities" alone. However, airports could potentially participate in a boundless number of commercial activities and markets. Other commercial activities, in which an airport company has an interest, but are otherwise unrelated to airport activities in any apparent way, are not examined for market definition purposes here. It is not important to define each of the possible markets for such other commercial activities. However, any effects these activities may have on pricing of airport activities are considered in the analysis of whether price control is necessary or desirable in the interests of acquirers and in the net benefits analysis.[49]

5.4. As noted earlier, price control can be introduced only where goods or services are supplied or acquired in markets in which competition is limited or is likely to be lessened. In this chapter, the relevant markets are delineated, and it is considered whether any of the three airports are able to exercise market power in any of those markets, such that competition could be seen to be limited in terms of section 52 of the Commerce Act. In other words, are there insufficient constraints (including both structural and behavioural aspects) on airports such that competition could be seen to be limited?

5.5. The possible constraints on airports' exercise of market power include the potential competition between airports or from other modes of transport; the possibility of new entry; the potential countervailing power of airlines; the regulatory control of airports, and competition from off-airport sources of supply. Each of these is discussed in this chapter.

---

[49] The effects of other commercial ventures undertaken by airports on the pricing of airport activities are likely to be indirect and linked to the financing costs of the company.

MARKET DEFINITION

5.6. Section 3(1A) of the Commerce Act 1986 provides that:

> {T}he term 'market' is a reference to a market in New Zealand for goods and services as well as other goods and services that, as a matter of fact and commercial commonsense, are substitutable for them.

5.7. The purpose of defining a market under the Commerce Act is to provide a framework within which to analyse the extent of competition, or its antithesis—market power. The concept of a market is thus considered to be an instrumental one, the defining of which is not an end in itself, but rather is an exercise intended to cast light on, or to assist with the analysis of, the conduct at issue. In *Queensland Wire* the Court stated:[50]

> In identifying the relevant market, it must be borne in mind that the object is to discover the degree of the defendant's market power. Defining the market and evaluating the degree of power in that market are part of the same process, and it is for the sake of simplicity of analysis that the two are separated...

5.8. The process of identifying the relevant market(s) should keep in mind the object of so doing. In the present case, the objective is to determine whether any of the three major airports have the potential to exert market power, such that competition in the market(s) for "airfield activities" is limited.

5.9. From a technical perspective, the process of establishing market boundaries can be seen as one of identifying the smallest area of product, geographic and functional space over which a hypothetical monopolist could exert a significant degree of market power. This approach focuses on all those close substitutes whose presence would prevent a hypothetical monopolist from exercising market power by raising its price or by other means. Such substitutes must be included in the market within which the hypothetical firm is to be a monopolist. Included are both actual and potential substitutes on both the demand and supply sides of the market.

5.10. An appropriately defined market will include products which are regarded by buyers as being similar or close substitutes ('product' dimension), and in close proximity ('geographical' dimension), and are thus products to which they could switch if the monopolist were to attempt to exert market power. It will also include those suppliers currently in production who are likely, in that event, to shift promptly to offer a suitable alternative product even though they do not do so currently.[51]

5.11. One approach to identifying a significant degree of market power (in the context of market definition) is in terms of the ability of the hypothetical monopolist to increase profits by imposing a small but significant and non-transitory increase in price (a "ssnip") above the competitive level. In line with overseas practice, the Commission

---

[50] *Queensland Wire Industries Pty Ltd v Broken Hill Pty Co Ltd* (1989) 167 CLR 177.

[51] These have been referred to by the Commission as "near entrants", to be distinguished from "new entrants" (*The Commission's Approach to Adjudicating Business Acquisitions Under the Changed Threshold in Section 47 – A Test of Substanitally Lessening Competition*, Commerce Commission Practice Note 4, 2001, p 19.

has used as a ssnip a five per cent increase in price, lasting for at least a year.[52] Starting from a small initial group of close substitutes, other potential substitutes are added to the group, until the hypothetical monopolist is able to profitably impose a ssnip. When this occurs, then all possible close substitutes must be encompassed by the proposed market definition.[53]

5.12. The fact that many airport facilities and services are operated under single ownership may indicate that integrated operation may be necessary for the efficient provision of airport services, in which case broader market definitions would be appropriate. This may be because of economies of scope making unbundling or duplication uneconomic.

5.13. In addition to the product and geographical dimensions, markets can be defined in relation to functional level in recognition of the fact that the production and distribution chain typically consists of a number of functional stages interlinked by markets. For example, the market between manufacturers and wholesalers might be called the "manufacturing market", that between wholesalers and retailers is usually known as the "wholesaling market", and that between retailers and end-customers the "retailing market". With regard to airport activities, the functional levels of markets generally relate to the provision of intermediate services by airports to airlines and other users.

5.14. Finally, markets may be defined in relation to time. For airports there may be peak periods of demand for their services, which may lead to congestion, and possibly to a justification for treating these peak periods as representing a separate market for airport services. At present, compared to the situations at some airports overseas, there are limited congestion problems at the three international airports in New Zealand. Wellington and Auckland airports can suffer from congestion at peak times. However, neither airport has decided to introduce a differential landing-charge based on time of day. Accordingly, a separate market based on time seems unwarranted at present. This does not preclude congestion becoming a significant issue in the future.

5.15. Despite the apparently clear-cut criteria discussed above, markets are not always easy to define in practice. In part this is because the process itself is inevitably an imprecise one since transactions in the economy do not always fall neatly into a series of discrete and easily observable markets. Hence it may not be practical—nor, indeed, always necessary—to identify the precise boundaries of the activities included in a market. Moreover, as already noted, it is appropriate to tailor the definitions used to meet the requirements of the case in hand.

---

[52] Ibid., pp 23-24.

[53] If, in response to the price increase, the reduction in sales of the product would be large enough that a hypothetical monopolist would not find it profitable to impose such an increase in price, then added to the group should be that good that is the next-best substitute for the good in question. This incremental process requires those goods considered the most likely to be close substitutes for the good in question to be added first to the group subject to the ssnip test. If this did not occur there may be goods or services which are added to the group which are not close substitutes.

AIRPORT MARKETS

5.16. It has been suggested that an airport exists to facilitate the interchange between surface and air transport of passengers and freight.[54] The facilities typically used include one or more runways (including taxiways and aprons); a terminal building or buildings where passengers are processed and retailing and servicing opportunities arise; freight handling facilities servicing imports and exports and domestic movements; and land-side roading and parking.

5.17. Airports provide a variety of facilities and services to a range of different parties, including airlines, passengers (both New Zealand and foreign residents), freight forwarders and transporters, taxis and public transport, flight training operators, recreational pilots, aircraft maintenance and engineering businesses, and retailers and other concessionaires. Each of the facilities and services provided to each of these different users might conceivably fall within a different market.

5.18. However, the fact that many airport facilities and services are operated under single ownership may indicate that integrated operation may be necessary for the efficient provision of airport services, in which case broader market definitions would be appropriate. It may be that the industry is organised as it is because a single supplier has lower transaction costs from organising its operations and co-ordinating activities internally, than would two or more independent suppliers attempting to organise and co-ordinate through the market.

5.19. In other instances, while it may be efficient for an activity to be provided by someone other than the airport company, suggesting these activities can be unbundled does not mean that that activity is necessarily undertaken competitively in a separate market. Airport companies may be able to charge higher than competitive rents (or other fees) from unbundled service providers based at the airport (or seeking to access the airport). A single unbundled service provider may also be able to charge excessive prices for the services or products they provide at the airport.

5.20. Some activities at airports could potentially be more competitive if entry barriers were removed.[55] Ultimately it is the availability of substitutes to acquirers that make markets competitive. Whether it is economical to duplicate facilities or services at each airport is considered below.

5.21. In a competitive market, the competition between alternative uses would generally sort out the appropriate degree of unbundling. It has been argued with regard to airports, the presence of public sector investment and regulation has until recently precluded competition. However, even with deregulation the scope for different modes of supply may be limited with the structure of the industry pre-determined

---

[54] Rigas Doganis, *The Airport Business*, London: Routledge, 1992, pp 7-10.

[55] It should be noted that the courts have recognised that a market may exist even though there have been no transactions in that market. In *Queensland Wire, op. cit.,* the High Court of Australia stated as follows: "...a market can exist if there be the potential for close competition even though none in fact exists...Indeed, for the purposes of the Act, a market may exist for particular existing goods at a particular level if there exists a demand for (and the potential for competition between traders in) such goods at that level, notwithstanding that there is no supplier of, nor trade in, those goods at a given time."

prior to deregulation. It is unlikely to change, therefore, in response to any competition which might emerge. To overcome this problem, it is worth considering whether it is economical to unbundle the facilities or services at each airport.

5.22. Demand characteristics are usually such that a number of airport activities are desired to be consumed at once, regardless of who provides them. As discussed, for example, an aircraft in seeking to merely land a plane and take off again, requires, at a minimum, numerous facilities and services to be available to it. The complementary nature of many activities suggests a broader market definition may be appropriate.

5.23. In some previous cases involving the transport sector, the Commission has adopted broad market definitions where there were a number of very similar, geographically distinct, markets. For example, in *Air New Zealand/Ansett* the Commission stated, in connection with the definition of air services markets:[56]

> Air services markets comprise a number of city pair routes. From a demand perspective, each could be considered as a separate market as, in most cases, services on one city pair are not seen by users as a substitute for services on another city pair. Fares on one route are unlikely to act as a constraint on those for another.
>
> However, where a number of narrowly defined markets exhibit similar characteristics, they can be conveniently treated as a single class for the purposes of competition analysis. In this case, supply side substitutability and economies of scale and scope in operating route networks also suggest wider market definitions are appropriate.

5.24. In the decision just cited, the various markets were grouped together because of their similar demand characteristics and because of supply-side connections. In the case of airports, a narrow market definition approach would, similarly, greatly extend the competition analysis required, as each would have to be considered separately. Much of that analysis is likely to involve duplication, since many of the markets will share the same or similar demand characteristics.

5.25. With the above considerations in mind, a possible delineation of markets follows. This delineation includes groupings of the various activities provided within that market. These groupings are used to identify particular elements of market power within each market.

Aircraft Movement Market

5.26. This market encompasses the services and facilities for the movement of aircraft. The services and facilities in this market may be grouped under the following headings: landing and take-off; aerodrome control; aircraft maintenance; and aircraft ancillary services.

5.27. These services are generally demanded for the purpose of facilitating aircraft movements and are complementary in their demand characteristics. They are similar

---

[56] Commerce Commission, *Decision No. 278: Air New Zealand Ltd./Ansett Holdings Ltd./Bodas Pty Ltd.*, 3 April 1996, p 21. A similar approach was also used subsequently in other cases, such as, *Decision No. 326: New Zealand Bus Limited/Transportation Auckland Corporation Limited*, Wellington: Commerce Commission, 15 May 1998, p 27.

in their demand characteristics. They are also generally uneconomic to unbundle to different operators.

Landing and take-off

5.28. The facilities and services provided to facilitate aircraft take-offs and landings include runways, taxiways, aprons, aircraft parking, airfield security, rescue fire service and environmental hazard control.

Aerodrome control

5.29. The facilities and services provided for aerodrome control include apron control, approach control service, control tower (and land for control tower), lighting and other navigational aids.[57]

Aircraft maintenance

5.30. The services and facilities provided for aircraft maintenance include hangars (and land for hangars) aircraft inspection, aircraft servicing and aircraft maintenance. Possible delineation from the market may be long-term repair or maintenance work, which can conceivably be done off-site.

Aircraft ancillary services

5.31. The services and facilities provided for ancillary services to aircraft operators include aircraft refuelling, flight catering and waste removal. Possible delineation from the market may be the storing of fuel and waste treatment, which may be done off-site.

Passenger Aircraft Access Market

5.32. This market encompasses the services and facilities provided to process arriving and departing passengers, both domestic and international, including check-ins, baggage handling, thoroughfares, departure lounges, toilet facilities, aerobridges, flight information and public address systems, terminal security, and customs, immigration and quarantine control.[58]

5.33. These services are typically demanded to access aircraft.

---

[57] In January 1997, the Commission released a draft determination stating that it would not authorise arrangements which would allow Airways Corporation of New Zealand Limited to delay the introduction of competition for air traffic control services. Markets examined in this draft determination included; Aerodrome Control Services Markets, Aerodrome Flight Information Services Markets, and Approach Control Services Markets.

[58] In its Decision 278, the Commission identified markets in which Air NZ and Ansett NZ competed. Markets identified included a terminal/ground handling services market.

Freight Aircraft Access Market

5.34. The services and facilities for the handling of air-transported freight, including offices and warehousing for freight forwarders, parking for freight vehicles, loading/unloading zones, and security, customs and quarantine for freight.[59]

5.35. These services are typically demanded to access aircraft.

Airport Access and Utilities Market

5.36. This market encompasses the services and facilities for the accessing and functioning of the airport and its facilities. The services and facilities in this market may be grouped under the following headings: utility services; and road access.

5.37. These services are demanded to access the airport and power its facilities. They are likely to be similar in their demand characteristics, although they may be demanded by different types of acquirers.

Utility services

5.38. The provision of water, telecommunications, power and gas reticulation services.[60]

Road access

5.39. The facilities provided to access the airport, including airport roads for private car, taxi, bus, truck and commercial operator vehicles, parking and pick-up and set-down points.

Commercial Activities Market

5.40. This market encompasses the services and facilities for the conduct of retail and commercial activities, either in the terminal buildings or elsewhere on the airport site.

5.41. This market could potentially be wider, given the potential for competition from facilities in areas surrounding the airport. However, these facilities are treated for market definition purposes as a site specific market, because these facilities are typically demanded because of other activities undertaken by these facility consumers at the airport.

---

[59] In its Decision 278, the Commission identified the following domestic freight markets: deferred delivery, which uses multi-modal transport; overnight delivery, utilising a combination of air and land transport; and same day delivery, for which air transport is necessary.

[60] In its Decision 338, the Commission, pursuant to section 81 of the Electricity Industry Reform Act 1998 (the EIR Act), declined to exempt Auckland International Airport Ltd from the application of the EIR Act in relation to a prohibited cross-involvement in an electricity lines business and an electricity supply business.

Conclusion

5.42. The Commission's preliminary conclusion is that for the purposes of the airports price control inquiry, the following markets are relevant with regard to airport activities:

- The Aircraft Movement Market.
- The Passenger Aircraft Access Market
- The Freight Aircraft Access Market
- The Airport Access and Utilities Market
- The Commercial Activities Market.

5.43. Each of the above markets may be replicated at (or around) each of the localities of the three international airports. The issue of whether airports are in competition with each other, or can be seen as geographically distinct, is discussed below.

5.44. Airfield activities make up part of the Aircraft Movement Market.

SUPPLY CHARACTERISTICS

5.45. The competition faced by airports from other airports may be of two kinds: the *potential* competition from prospective new entrants, and the *existing* competition from other airports already operating. Each is now examined in turn.

Potential Competition

5.46. The nature of the investment in a major airport facility, such as those at Auckland, Wellington and Christchurch, is likely to be such that barriers to entry are high, and hence that competition from potential entrants is low. In particular:

- Entry would require a large, very long-term investment in land, runway, terminal buildings and other infrastructure. Much of that investment would be sunk, meaning that it would not be recoverable upon exit, especially where exit was induced by excess capacity and inability to gain market share from an incumbent. Hence, the barriers to exit would be high, and that realisation would in turn discourage entry in the first place.
- Even if land were available, the environmental and planning implications of a new airport would be wide-ranging, and land-use consents would be time-consuming to acquire, especially given the likely resistance from adversely affected residents or others concerned with the concept.
- The time lag between a company considering the possibility of building a new airport and the airport coming into service is likely to be several years. This time lag would give an incumbent ample time to organise strategies to meet the prospective competition, including the building of a second runway if entry had

been induced by constraints on current capacity. This issue would be less likely in the case of Wellington because it's constrained by the size of its site.

- The building of a new airport by no means guarantees that airlines would wish to use it. A new airport would probably have to be built further away from the main population centre than the existing one, imposing higher travelling times and costs on passengers, who may in consequence resist using the new facility. It may also lack connections to some other domestic and international centres, adding to the inconvenience by preventing passengers from interlining.

- Incumbents are likely to benefit from economies of scale, so that few regional markets would be large enough to sustain more than one airport. In the New Zealand context, with even the major airports serving relatively small population centres by international standards, existing airports generally appear to have either significant excess capacity at non-peak times, or the ability to expand incrementally (e.g., by means of additions to existing terminals or by adding new terminals or runways). This may enable them to meet or undercut the charges of a new entrant, especially given that its facilities would be likely to be under-utilised in the first several years of operation.

Conclusion

5.47. The factors above combine to suggest that barriers to the entry of new airports are likely to be very high, and hence that the potential competition faced by existing airports from this source is weak.

Existing Competition

5.48. The extent of competition between existing airports depends largely upon the degree to which airports are substitutes for one another. This depends in part upon their geographic proximity, and hence upon the willingness of users and their passengers to substitute between them. Such demand-side matters are considered in the next sub-section. The concern here is with supply-side substitutability.

5.49. Airport substitutability from a supply-side perspective depends largely upon the size of aircraft. Smaller aircraft are more flexible as to where they can land, with a grass strip being adequate for small general aviation (GA) aircraft. For GA it is possible that Ardmore Airport is a substitute for Auckland International Airport, and Paraparaumu Airport for Wellington International Airport.[61] Indeed, such substitution has to some extent been forced upon GA operators by operating constraints and congestion at the three international airports, and also by charges—GA landing charges have seen the biggest increases in the last ten years. Although GA still uses the major airports, and some operators have a preference to do so because of the better facilities and location, much of that traffic has been forced out at peak times.[62]

---

[61] Ardmore is the country's busiest airport in terms of numbers of aircraft movements.

[62] Major airports sometimes explain their tolerance of GA activity as being their contribution to pilot training, which ultimately benefits commercial aviation, within which are found their main customers.

5.50. Larger turboprop and jet aircraft are confined to the larger regional airports, although it is difficult to generalise. The issue as to which aircraft can use which airports is complex. The factors involved are predominantly aircraft wheel loadings ('weight') and performance, runway characteristics (including length, layout, local terrain, altitude and ambient air temperatures), and commercial viability. With respect to the last, it may technically be possible for a 'large' aircraft to use a 'small' runway, but its payload and operational range may be so restricted as to make it not commercially viable.

5.51. At the extreme, B747s are restricted to Auckland and Christchurch airports, so that no other airport in New Zealand could be a supply-side substitute. B767s use those two airports plus Wellington, while B737s and BAe146s are able to use several of the regional airports. The smaller aircraft used on regional services—including Dash 8s, Metroliners and Bandeirantes—are even more flexible as to airport availability.

5.52. From a purely supply-side perspective, for domestic traffic—because it does not involve the use of the larger aircraft—there appears to be considerable scope for substitution between a number of airports. For trans-Tasman routes there is some flexibility as B737s are now commonly used. However, for long-haul international traffic, which typically uses larger aircraft, the scope for supply-side substitution is much reduced.

5.53. It is understood that there are plans to extend the runways at a number of regional airports so that they are able to accommodate international flights, e.g., Rotorua, Tauranga. This would potentially increase the number of alternative suppliers of airport facilities for international flights.

5.54. Local airports which are adjacent to the three major airports—such as Paraparaumu for Wellington, and Ardmore for Auckland—would not appear to be good supply-side substitutes for international flights without substantial upgrading.

Conclusion

5.55. From a supply side perspective, there appears to be considerable scope for substitution between a number of adjacent airports for the relatively "footloose" GA aircraft. However, GA yields relatively insignificant revenues for the major airports, and would not be expected to induce competition between them. Indeed, GA switching to another adjacent airport in response to a rise in landing charges may be considered a beneficial as this could free up runway capacity at peak times.

5.56. Given the upgrading required of regional airports to handle larger aircraft, it seems likely that there are no substantial near entrants to compete effectively with the three large airports for domestic commuter traffic and international traffic.

DEMAND CHARACTERISTICS

5.57. On the demand side, the question as to whether individual airports operate in markets where competition is limited or likely to be lessened depends upon the extent to which the services they provide are substitutable for other services from the viewpoint of consumers.

Demand Elasticities

5.58. In assessing the elasticity of the demand for an airport's services, the picture is complicated by the fact that the demand in question is a derived demand, i.e., it is the demand for an intermediate input. Such inputs have the characteristic that they are not wanted for their own sakes, but rather because they contribute to the production of the final good or service demanded by customers. Since estimates of price elasticities are easier to obtain for final rather than intermediate products, the question becomes one of how to infer the elasticity of the one from that of the other?

5.59. At one level, the final service is the provision of passenger and freight transport services by aircraft operators. The demand for airport services is thus derived from the demand for passenger and freight transport services. Arguably, these are themselves intermediate products, again not wanted for their own sakes, but as a means of satisfying some ultimate consumer want: getting to a destination, either for business or leisure purposes in the case of a passenger, or for the delivery of an item of freight in the case of freight transport services.

5.60. A focus on the demand for air passenger and freight transport services is a useful starting point as these have been the subject of demand studies and elasticity estimates. A limitation of such studies for present purposes is that being country-based, they do not distinguish between the demands for air passenger and freight transport services provided at individual airports. Rather, it is the demand at all airports. Hence, the resulting elasticities have more to say about the substitutability between air travel and other transport modes, than between airports. Nonetheless, the principles which emerge shed some light on that issue too.

5.61. Because an airport may serve various consumers, the derived demand for its services will be a weighted average of the demands from each of those consumers. However, since the primary focus of commercial aviation is with passengers, and the great majority of air freight is carried in the belly-holds of passenger aircraft as a by-product of meeting passenger demand, most attention can probably be paid to the demand by passengers for air transport in pursuit of business and leisure activity.

5.62. The price elasticity of demand for airport services will, thus, be related to the price elasticity of demand for air travel for business and leisure pursuits through standard factors which link intermediate and final product demand curves. Those factors are:

- The price elasticity of demand for the final product (measuring the responsiveness of buyers of that product to changes in its price, reflecting in part the availability of substitute products).

- The relative cost of the input in the total cost of the final product.

- The elasticity of input substitution (measuring the ease or difficulty with which that input can be substituted for by other inputs, in a given time period).

5.63. Each of these factors is dealt with in turn below.

Demand Elasticities for Air Travel

5.64. The more elastic is the demand for the final product, the more elastic (or less inelastic) will be the demand for the intermediate inputs used in its production, all else remaining the same. Overseas studies of the demand for air travel suggest that the price elasticity is moderately high. One survey by Tretheway and Oum, which refers to studies published in the 1980s, mentions a figure of between -1.1 and -1.3 for Canada (based on a 10% drop in price), and -1.15 and -1.5 for business and leisure travellers respectively in the United States.[63] The latter pair of figures reflect the established view that business travellers are less price sensitive than leisure travellers.

5.65. In the *Air New Zealand/Ansett Holdings* merger application, the applicant recommended, and the Commission accepted, that for New Zealand the use of a price elasticity of demand of -1.5, averaged across all domestic air travellers, was appropriate.[64] This figure was said by Air New Zealand to reflect overseas experience of airline demand.

5.66. It is likely that the elasticity of demand for international air travel will be higher than for domestic air travel. This is because much more international travel is leisure related, which is more discretionary and income sensitive, and because of the availability of substitute destinations. In addition, international travel is typically more costly than domestic travel, implying that a given percentage rise in price would have a relatively larger "income effect".[65] There may be other factors, such as exchange rate risks related to "spending money", which may make international travellers more sensitive to changes in the price of air travel.

Relative Cost of the Input

5.67. The relative cost of the input in question in the price of the final product is important. If the cost of an input were to contribute only a small amount to the cost of an airline ticket, then even if the price of that input were hypothetically to as much as double, the increase in the airline's costs, and hence in the prices of its tickets, would be relatively small. The combination of the large increase in the input price and the resulting small fall in the quantity demanded would generate a low price elasticity for the input. When the cost of the input comprises a large proportion of the price of the final product, its price elasticity will be closer to, though still lower than, that of the final product.

5.68. It is generally accepted that airport charges constitute a small proportion of the cost of an airline ticket. A figure of 3% for the proportion of aeronautical charges to airline

---

[63] Michael W. Tretheway and Tae H. Oum, *Airline Economics: Foundations for Strategy and Policy*, Vancouver: Centre for Transportation Studies, University of British Columbia, 1992, pp 14-15.

[64] Commerce Commission, *Decision No. 278: Air New Zealand Ltd/Ansett Holdings Ltd/Bodas Pty Ltd*, Wellington: Commerce Commission, 3 April 1996, p 84.

[65] The income effect of a change in price is that proportion of the effect attributable to the consumers change in real income. The higher the initial price of a good, the greater the income effect generally will be, for a certain percentage rise in price. By way of illustration a 10% rise on an initially priced $1,000 overseas ticket would imply $100 extra would have to be paid out of income, compared to $10 for an initially priced $100 domestic ticket.

operating costs has often been quoted. However, Doganis points out that this figure was a world average that concealed wide variations between airlines and between short and long-haul flights.[66] For example, he found that for most European charter airlines, which general operate on short hauls, airport charges represent about 15% of their total operating costs.

5.69. The proportion of costs that airport charges constitute varies between aircraft types and routes. Aircraft used by different operators vary widely in size, and consequently their sensitivity to airport charges is likely to vary. Long-haul flights tend to use large aircraft, and short-haul flights small aircraft. The former are less likely to be deterred from using airport facilities by an increase in charges, because the increase is likely to form a smaller proportion of their costs and of passengers' airfares.

5.70. In New Zealand the indications are that airports' charges constitute less than 10% of the operating costs of airlines for domestic routes.[67]

Elasticity of Input Substitution

5.71. In theory the demand for airport services could be more price elastic than that of the final product if there were alternative inputs for airport services which could easily be substituted. Any attempt by airports to raise their charges would be met by airlines switching to using the alternative inputs, resulting in an elastic demand response from users and hence little market power on the part of the airports. However, there appears to be no close substitutes for airport services either available currently or in prospect. This factor cannot, therefore, be expected to exercise a competitive constraint on the behaviour of airports.

Conclusion

5.72. The preceding discussion suggests that the elasticity of input substitution can be ignored in estimating the price elasticity of demand for airport services. Only the first two factors—the final product elasticity and the relative cost of the input—then need to be considered. If the final product price elasticity were -1.5 as suggested above, and airport charges were to amount to, say, 7% of ticket prices on average, then the price elasticity of demand for the airport services input on average would be: -1.5 x 0.07 = -0.105. This would mean that a 10% increase in airport charges would lead to only a 1.05% decrease in the demand for airport services by travellers, indicating that the derived demand for the input was very price inelastic. The implication is that airports have significant pricing power, but the exercise of that power has little impact on final consumer demand.

5.73. In Australia, the elasticity of demand for airport services by airlines was estimated by the Prices Surveillance Authority (PSA) to fall in the range of -0.1 to -0.225 in the early 1990s.[68] The PSA noted that while those estimates were low, they were not so

---

[66] Rigas Doganis, *The Airport Business*, London: Routledge, 1992, pp 62-63.

[67] The more significant operating costs of an airline are maintenance, fuel and salaries.

[68] The PSA also refers to a 1972 US study of general aviation, which produced an estimate of price elasticity of demand by GA for airport services of –0.7. Prices Surveillance Authority, *Inquiry into the*

low that airline operators would be entirely insensitive to airport charges. At 10% increase in airport charges would lead to only a 1% to 2.25% decrease in the demand for airport services. However, while the PSA mentioned a wide range of values for the relative cost of the input, higher shares of charges in air fares were used in making the elasticity estimates.[69]

Other Modes of Transport

5.74. It has been argued that in some countries and regions, air travel in general, and therefore airports as a group, are likely to be constrained by competition from other transport modes serving the same routes. Examples cited include the high-speed trains in Europe, and leisure travel along the eastern seaboard of Australia. If such were often the case, the ability of airports to exploit their potential market power as input providers would be constrained by the contestability in the final product market.

5.75. However, while other transport modes might offer some limited competition at the margin (most likely for small aircraft on short flights and long-term pleasure travellers), air travel is much faster, a factor especially valued by business travellers. In addition, there tends to be fewer alternative modes of transport available to long-haul passengers, particularly when crossing a body of water. Hence, it would appear that airports are unlikely to be constrained in their pricing behaviour by competition to airlines from other transport modes.

Competition Between Airports

5.76. Since all airports provide the same basic services, subject to the aircraft-related restrictions noted above, the question of competition reduces to one of geographic market definition. Do Auckland, Wellington and Christchurch international airports each operate in their own regional geographic market, in which case they are likely to be the only supplier, with competition for customers and users being very muted; or does each airport operate in a wider (perhaps national) market, in which case each would compete with one or both of the others?

5.77. The appropriate focus to consider in answering the above question is the price elasticity of the demand for the services provided by each airport, which embodies the cross-price elasticities for substitute products.[70] Where there are no close substitutes, any cross-price elasticities are 'low', and the demand curve is likely to be

---

Aeronautical and Non-aeronautical Charges of the Federal Airports Corporation, Report No. 48, Melbourne: PSA (1993), pp 37-40.

[69] Ansett in its submission to the PSA estimated the share of costs of landing charges to air fares as between 4.7% to 11.2%. If rent charges were included the share of costs in air fares rose to between 8.4% to 17.3%. Qantas suggested the share of airport charges in their total direct operating costs was of the order of 8.8% for domestic operations and 2.3% for international operations. PSA (1993), *op. cit.*, p 40

[70] Demand theory shows that the price elasticity of demand for a good is the sum of the income elasticity and all of the cross-price elasticities. For the great majority of goods the income elasticity is likely to be low. However, for "superior" goods the income elasticity may be high. It is arguable whether airport services are a superior good, with air travel for many passengers now being a common experience. R. Bewley, "Using Elasticities to Define a Market", *Discussion Paper on Using Econometrics in Market Definition and Market Power Assessment*, Discussion Paper No. 7, Prices Surveillance Authority, Melbourne, 1995.

unresponsive to changes in price, because users have no alternatives to which they can turn in the event of a price increase. If that were the situation for the demand curves faced by individual airports, they would, by implication, be operating in their own regional geographic markets in which they would be able to exercise market power (given the lack of supply-side constraints on market power noted above).

5.78. Alternatively, if the services offered at different airports were close substitutes, the cross-price elasticities would be 'high', and the demand curve faced by an airport would tend to reflect this by being responsive to changes in price, so that an airport would not be able to raise its price without losing a substantial number of users. The airport would then be part of a broader geographic market in which its market power would be constrained by the competition from the close substitute services provided by other airports.

5.79. As noted above, there appears to be no evidence available on the price elasticity of demand for air travel through individual airports, from which it would be possible to make inferences about substitutability between airports. Instead, such inferences have to be drawn using other information and analysis.

5.80. For non-business air travel, particularly leisure travel other than "visiting friends and relatives", it is the destinations which often compete. Strong competition between destinations might conceivably encourage airports to compete. New Zealand airports must compete indirectly with other international airports as stop-over points and for the international tourism trade, and with Australian airports as regional hubbing points. International deregulation of airline routes (e.g., through a single trans-Tasman airlines market) may encourage further competition between airports and possible by-passing of current connection points in the future (e.g., tourists to Queenstown may by-pass Christchurch airport, if direct flights from overseas to Queenstown are allowed under bilateral agreements and subject to supply side constraints).

5.81. However, the ability of airports to influence travellers ultimate destination choices through varying their charges seems slight. Moreover, business travel is probably very much destination-specific. Hence, it seems unlikely that competition between destinations will constrain airports' charging behaviour.

5.82. Airlines may find it economic to form networks around a hub.[71] An airline'ss demand at such a hub airport is likely to greater that at potential substitute airports, suggesting that they are less likely to shift from such a hub. In New Zealand, Auckland airport acts as a hub for international travel for Air NZ. Wellington airport claims to be a domestic hub.

Domestic Air Travel

5.83. For domestic scheduled services there appears to be no real competition between the three major airports, or between them and other regional airports. Passengers wishing to fly from one to another would not find a third airport a substitute either as a

[71] Brueckner J., Dyer, N., and Spiller, P., *Fare Determination in Airline Hub-and-Spoke Networks*, RAND Journal of Economics, Vol.23, No.3, Autumn, 1992, pp 309-333.

departure or an arrival point. For example, a person wishing to travel to Auckland would find Ardmore a poor substitute because of the time delays and the extra costs imposed, particularly for business people on a day return trip, leisure travellers making international connections, and commuter travellers who are interlining (who would suffer the inconvenience of having to transfer between airports if they were delivered to an airport other than the one at which they were making their connection). Competition between the domestic airlines would probably ensure that Auckland remained the destination, even in the face of a substantial increase in airport charges. Similarly, travellers to Wellington would probably find landing at Paraparaumu an inconvenience, unless they live in the northern suburbs or beyond. This suggests that the three major airports are regional monopolies for domestic services, in that there are no substitutes for their services for travellers wishing to fly in to or out of those centres.

International Air Travel

5.84. International passengers potentially have more flexibility as to choice of airport at which they arrive in, and depart from, New Zealand. International passengers are both foreign tourists and New Zealand residents (The majority going on short-term holidays overseas). About 42% of international passengers arriving in New Zealand are New Zealand residents (the majority returning after short-term holidays overseas).[72] Of the remaining international passengers, 63% are arriving from Oceania (mostly Australia).

5.85. The great majority of overseas tourists enter and exit the country via Auckland, but many travel south and exit via Christchurch. Christchurch International Airport promotes itself as the point of entry for the South Island. For trans-Tasman travel Hamilton, Palmerston North, Queenstown and Dunedin provide some competition to the three large airports at the margin.

5.86. Foreign tourists may be more price conscious (due to available substitutes and the higher costs of getting to New Zealand from many European and American countries), so that international airlines in turn may be more price sensitive with respect to airport charges. However, because airport charges make up a relatively small proportion both of airline total costs, and of the costs to passengers of overseas trips, a substantial increase would probably be needed to provoke much switching.

5.87. Auckland airport has by far the largest share of New Zealand's international traffic, with about 70% of passenger numbers in the year to 30 June 2001. Figures for Christchurch and Wellington airports respectively are 18% and 8%. It seems that Auckland has advantages over the other two major international airports because of the larger population in its catchment area, its relative importance in air freight (Auckland carries most New Zealand-originating international freight), and its proximity to international aviation routes.[73] It also has the necessary infrastructure associated with servicing international airlines. It has a further advantage over

---

[72] By airport, the percentages are 42% at AIAL, 58% at WIAL, and 30% at CIAL.

[73] Ministry of Transport, *Review of New Zealand Airport Regulation*: *Proposals for Consultation*, Wellington: MOT, 1995, p 10.

Wellington in being able to handle the largest international jets needed for maximum flight distances.

5.88. New Zealand residents may have little choice as to where they commence their international travel, unless they are willing to first travel overland. Together Hamilton, Palmerston North, Dunedin and Queenstown airports handle about 4% (1.7%, 1.2%, 0.8% and 0.3% respectively) of international passengers. The majority of passengers using these airports are New Zealand residents. These airports, however, can not be seen as presently providing effective competition to the three large airports.

5.89. For destinations outside of Australia (where each of the three large international airports host airlines with direct flights) the majority of New Zealand residents will have to go through Auckland airport to join connecting flights on route to their ultimate destination.

Conclusion

5.90. The conclusion follows that with respect to aviation services, each of the three major airports operates largely within its own geographically distinct regional market, which are the greater population areas around the three airports (namely the greater Auckland, Wellington and Christchurch areas). Each airport faces a demand from acquirers who do not see the other airports as offering viable substitute services.

5.91. Meeting demand for flights is the overriding factor determining which airports an airline flies to, rather than the costs of doing so. Airport charges, although not insignificant to airlines, are unlikely to make the difference between an airline flying or not flying to a particular city. Each of the airports is therefore unlikely to find itself constrained by the behaviour of its users. Variations in charges between airports are unlikely to influence demand much, although they may have some impact at the margin.[74]

COUNTERVAILING POWER AND REGULATION

5.92. As noted in chapter 3 of this report, the current regulation of airports relies principally upon the countervailing power of airlines and the requirements on airport operators to consult major customers at under section 4 of the Airport Authorities Amendment Act 1997.

5.93. It would seem a rational negotiating tactic for airports to propose a more favourable deal, than they may be willing to accept, when commencing their consultations. Given the asymmetric information between the negotiating parties, airlines, in particular, may not be in a position to judge the minimum amount airports would be willing to accept at the onset of consultation. Disclosures made by the airports may mitigate some of the asymmetric information differences.

[74] In Britain cut-price charter operations can be sensitive to airport charges and are an important feature of the aviation industry. Such operations, however, are small in New Zealand.

5.94. When the nature of the regulatory regime to apply to airports was being considered in the late 1980s, one argument was that the presence of three major independent airports lent airlines some degree of countervailing power in the event of a major dispute over airport charges for international flights.

5.95. One argument suggesting countervailing power was that airlines' capital (in contrast to that of the airports) was relatively mobile, and hence had the potential to be deployed elsewhere. Having said this, airlines do invest in costs which become sunk at particular airports (for example maintenance facilities), thereby reducing their ability (and hence the credibility of any threat) to move elsewhere, thereby undermining any countervailing power they might possess.[75] However, airports also have specific purpose assets which could not be used (or would have considerably lower value) for an alternative purpose.

5.96. It seems likely that some flights might be switched between airports, with Wellington's Australia flights being suggested as being the most vulnerable, since they could be moved either to Christchurch or Auckland.[76] However, given the competition between airlines (e.g., Air NZ and Qantas on trans-Tasman routes, which has included large increases in capacity and frequency), it would probably take concerted action by all airlines to have much influence on any airport. Unilateral action by an airline is likely to improve the position of its competitors, while co-ordination of action can be costly.

5.97. Overseas-based international airlines have the power to deploy their limited fleets to destinations in other countries, and some have withdrawn services to New Zealand, or resorted to code-sharing when services proved to be unprofitable. However, it is difficult to see how Air NZ, for example, could withdraw from providing international air services to this country, given that this is its home market base in which it has a strong position.

5.98. The boycotting by airlines of airports which raise their charges is likely to be even less effective in relation to domestic flights, because passengers wish to travel to specific airports. For a passenger, the distance between the preferred destination and the airport is likely to be more important than a small price differential between airports (as reflected in the ticket price). Put another way, such a price differential is unlikely to create a demand for a destination. The difficulty, essentially, is that the demand for air travel and airport services is derived from the demand for the activities to be undertaken at the destination. Airlines respond primarily to the point-to-point demands, and as a result appear to have limited ability to divert traffic to other destinations as a way of putting pressure on airports which they consider to be over-charging.

5.99. The size of the airlines and their collective efforts may assist them in exerting countervailing power. The number of airlines operating at each of the three major airports is quite small, and a handful provide the bulk of revenues. Some important customers, such as Air NZ and Qantas, are very large companies, and much larger

---

[75] In Britain charter operators are considered to have more countervailing power than schedule operators because they can switch between airports more easily.

[76] Travers Morgan, *Airports Regulatory Review*, 1989, p 49.

than the airport companies with which they deal. This may give them deeper pockets in any action against airports. In addition, there is a growing tendency for international alliances to be formed between airline; airlines have a demonstrated capability to act collectively, as through BARNZ, and including political lobbying, in pursuit of their common interests; and face the incentive, as users interested in minimising their costs in a competitive airlines industry, to monitor airport charging and efficiency.

5.100. It seems likely that airlines stand to lose greater amounts than airports from withdrawing custom, losses that may not be recovered through any concessions won from the airport. These costs would rise dramatically if the airlines sought to challenge more than one airport at a time in this manner, as it would further reduce their potential to substitute to alternative airports.

In Practice

5.101. Both AIAL and CIAL entered into memorandums of understanding with the airlines shortly after corporatisation which, among other things, set out their respective responsibilities in general terms and specified a profit ceiling of a 10% after-tax real rate of return on shareholders' funds on the airfield, domestic terminal and international cost centres. Travers Morgan considered that both the existence and content of the AIAL agreement was "most unusual", and "evidence of recognition of the countervailing power of airport users".[77] In 1997 WIAL seemed to go further by entering into a Deed with its airline customers (Air NZ, Air Pacific, Ansett NZ, Polynesian Airlines and Qantas) which sets out arrangements for consultation and charging, among other things.

5.102. However, there has been much dissatisfaction with the consultation process and its outcomes. The major airlines have demonstrated a willingness to withhold airport payments and to consider court action. Litigation occurred twice in connection with WIAL's setting of charges, initially upon its corporatisation, and also in connection with a subsequent increase. Such litigation imposed substantial costs on the airport, both in terms of the expenses of lawyers and experts and in diverted management time, which are significant considerations for a moderately-sized company. Nonetheless, litigation has been repeated for subsequent consultation outcomes at other airports.

5.103. In October 1999 AIAL proposed a total increase in landing charges of 35.54% over the next three years (2000-2002). During consultations with the airlines, the proposed increase fell. In August 2000, AIAL announced a total increase of 18.5% in its landing charges over the three years. In October 2000, Air NZ initiated court proceedings against AIAL in respect of the increases and AIAL's obligation to consult.

5.104. Like AIAL, CIAL went through a number of proposals during consultation before arriving at new higher charges. However, CIAL did not propose a flat across the board increase in landing charges. In general, the landing charges for international aircraft decreased, while the landing charges for domestic aircraft increased.

---

[77] Travers Morgan, *op. cit.*, pp 32-34.

Overall,charges for large aircraft increased over the course of consultation, while charges for small aircraft decreased or remained unchanged.

5.105. Large airlines may be able to negotiate some individual concessions with the airports. The possibility of this may be mitigated if there is the possibility that some airlines may reduce use of the airport because of a perceived unfairness. However, such airlines are likely to provide marginal revenue for the airport and may therefore be not provide much discouragement to airports taking such actions.

5.106. Airports, especially the smaller ones, may be vulnerable to changes in airline schedules at short notice. For example, in 1995 Dunedin Airport found that in the space of a week the two major airlines using the airport—Air NZ and Ansett NZ—which previously had supplied their schedules for the year, both announced that they were switching from jets to mainly turboprop aircraft. These aircraft fell in a lower charging weight group so that even with increased frequency, total revenues fell. At the same time, airport costs increased because greater frequency meant labour shifts could no longer be split. Other smaller airports have apparently made the same claim. It appears that airports reliant on a very few users are most likely to be susceptible to such a risk.

5.107. One regional airport stated that the consultation process typically lasts one-and-a-half to two years, which delays the implementation of any price increase, and imposes costs which makes the airport think twice before proposing the change in the first place.

Conclusion

5.108. The Commission has reached the preliminary conclusion that neither Auckland, Wellington or Christchurch international airport are likely to be significantly constrained by the countervailing power of airlines. The three large airports are unlikely to be dependent on a few airlines to such a degree as regional airports.

OFF-AIRPORT COMPETITION

5.109. A variety of services provided by airports on-site may also be provided by other off-site companies. These services can include aircraft maintenance, aircraft fuel storage, waste disposal, flight catering facilities, and commercial concessions. For example, fuel can be trucked in, scheduled aircraft maintenance could be undertaken at numerous airports. In a number of instances off-site companies are used for particular airport related services, suggesting there is a certain level of competition in these markets.

5.110. However, where goods or services could be trucked in or out, an airport may set "access charges" for the off-site service provider to cross its land.[78] It may be possible for airports, therefore, even if they are not providing the service directly, to set access charges to such a level that they, in effect, claim the economic rents which may otherwise emerge if they were a monopoly supplier of that service.

[78] Access charges are those charges levied by the airport on a supplier of a service or product to another party at the airport and can include license fees, toll charges, etc.

5.111. A variety of commercial concessions operate in airport terminals There are space limitations on the number which can be accommodated. From a competition perspective, the crucial issue is often the geographic extent of the market. Is it limited to the airport itself, or does it extend beyond to the adjacent city area?

5.112. In one case the airport itself was found to constitute the geographic market for car rental services. This case concerned the Auckland Regional Authority (ARA), which sought a declaratory judgement in 1987 as to whether it was obliged, under the Commerce Act, to grant licences to more than the two rental car operators already holding licences at Auckland International Airport, of which it was controller.[79] The Court found that the ARA was able to influence the relevant market, which was for rental car services at Auckland International Airport (rather than in the wider Auckland area) through its dominance in the market for concessions to car rental firms. Moreover, the ARA agreed that its purpose in granting concessions to only two firms was to maximise its revenue. Under the licence tendering process, the two successful firms entered higher bids when there were to be only two operators, compared to when there were to be three.

5.113. A similar issue of market definition was raised in *Compass*, the question was raised in relation to the market for duty free goods in Auckland, and whether the geographic extent of the market was limited to the airport, or included the city area.[80] Although Wylie J noted that it would be inappropriate to resolve the issue, he did state that duty free shops in the city were likely to provide competitive constraints on the duty free shop at the airport.

5.114. Airports internationally typically fix rentals by various means: on the basis of the costs incurred, or according to the rentals in similar properties in adjacent areas, or using some mix of these approaches. An ICAO study in 1979 which examined this issue in over 100 airports in 61 countries found that 25% based rents on costs, and another 34% used costs plus other factors which most often included market values. There is no requirement as to what approach airports should use to determining rentals in New Zealand.

5.115. Airports may impose requirements in their terminal leases and concessions to retail activities that the prices set by those retailers are no higher than those at comparable retail outlets in the adjacent central city area. Christchurch airport is understood to have such requirements for some of the concessions operating in its terminal. This requirement would appear on the one hand to recognise the scope for airport retailers to set prices for merchandise above the competitive level, and on the other to prevent the airport from being able to extract supra-competitive concession rates from its tenants.

---

[79] *Auckland Regional Authority v Mutual Rental Cars (Auckland Airport) Ltd*., 2 NZLR [1987] 647-681.

[80] *Compass Tax and Duty Free Shopping Ltd v Miles DFS Ltd*, 2 TCLR [1987] 32-44.

Conclusion

5.116. It is the preliminary finding of the Commission that off-site competitors do provide some competition to airports in certain services in most of the markets in which the airports operate.

5.117. Even where tendering of service provision occurs, the airports retain the ability to potentially extract monopoly rents through the rental and access charges obtained from alternative suppliers.

COMPETITION ASSESSMENT IN THE AIRCRAFT MOVEMENT MARKET

5.118. In the light of the general assessment of competition facing airports above, the extent of competition in the market for airfield activities is now considered.

5.119. While it is not economical that the three international airports be duplicated at new sites, considering whether it is economical to duplicate the facilities or services at each airport site will help determine whether competition could be further introduced into those markets.

5.120. The aircraft movement market includes the facilities and services provided to facilitate aircraft movements. These include:

- Runways
- Taxiways
- Aprons
- Aircraft parking
- Control tower
- Approach control service
- Lighting and other navigational aids
- Apron control
- Airfield security
- Rescue fire service
- Safety and environmental hazard control
- Facilities for servicing & maintenance
- Aircraft refuelling
- Flight catering
- Waste disposal

5.121. Market power is probably relatively high in this market due to the lack of supply side substitutes. It is not economical, and often not possible, to duplicate many of the assets associated with facilitating aircraft movement. This suggests that the bulk of assets above are to be provided by a single supplier. These assets are runways, taxiways, aprons, aircraft parking, control tower, approach services, lighting and navigational aids, apron control, airfield security, and rescue fire services, safety and environmental hazard control

5.122. Airports might compete to some extent for the provision of aircraft maintenance facilities and services. This suggests there is some choice and hence competition. However, competition is likely to be limited by commercial and operational realities. Repairs that have to be done immediately can not be “put off” till the aircraft lands at a cheaper airport for servicing, although some long-term scheduled maintenance may. In addition, airlines will usually invest significant sums in the facilities for service and maintenance. Once established, these facilities would be very expensive to move or fully replicate. It may be generally economic for an airline to locate its maintenance facilities at its main hub.

5.123. Refuelling, flight catering facilities and waste disposal activities may have scope for competition, particularly from off-site competitors. However, this will be limited by the access rights granted to suppliers. There is also the potential for airports to gain economic rents through access charges to its land or other facilities.

CONCLUSION

5.124. In this chapter, the various possible constraints on airport market power in the New Zealand context have been evaluated, with particular focus on the three major international airports. Firstly, airports in their geographical locations appear to be natural monopolies, facing little competition from potential entrants on the supply-side. Demand for their services appears to be highly price inelastic, by itself giving them considerable scope to exercise market power. Competition between airports for patronage appears to be muted, in part because their charges constitute a small proportion of airline costs, and because they are not seen as substitute destinations by passengers and freighters.

5.125. The structure of the market, and the impact of a regulatory approach that is designed to encourage countervailing power, provides a counter-weight to the potential market power of the major airports. However, the presence of such a regulatory framework indicates a concern about possible market power. The evidence of litigation also indicates that there is dissatisfaction with the outcome of the consultation process.

5.126. Where airport services are provided by off-site competitors, airports can still potentially exert market power in the setting of rentals for certain airport activities. This is most likely when off-site services are an ineffective substitute for on-site facilities. In addition, access charges may capture some of the potential economic rents, when services are provided by an alternative off-site provider.

5.127. The Commission has reached the preliminary conclusion that competition is limited in the aircraft movement market.

5.128. The section 54 Notice requires the Commission to report on whether "airfield activities provided by the three major international airports are supplied or acquired in a market in which competition is limited or is likely to be lessened". Airfield activities are part of the aircraft movement market which, in the Commission's preliminary view, is subject to limited competition. The goods or services (falling within the definition of airfield activities) provided by the three major international airports that are, therefore, subject to limited competition are:

Table 21
Airfield Facilities Subject to Limited Competition

	Goods and Services Supplied		
Airfield Activities	**by AIAL**	**by WIAL**	**by CIAL**
Airfields, runways, taxiways, and parking aprons for aircraft	Airfields, runways, taxiways, and aprons.	Airfields, runways, taxiways, and aprons.	Airfields, runways, taxiways, and aprons.
Facilities and services for air traffic control	Land beneath Airways Control Tower	None.	Provision of Control Tower on top of terminal.

	Goods and Services Supplied		
Airfield Activities	**by AIAL**	**by WIAL**	**by CIAL**
Facilities and services for parking apron control	Apron control service at the international terminal apron.	Apron supervision vehicles.	None.
Airfield associated lighting	Cable ducts and light pots for the entire airfield; cabling for light fittings for aprons and first taxiways; and apron lights.	Stand lighting and noise in guidance units.	Apron flood lighting.
Services to maintain and repair airfields, runways, taxiways, and parking aprons for aircraft	Services to maintain and repair airfields, runways, taxiways, and parking aprons for aircraft.	Supervision of maintenance by independent contractors.	Day-to-day maintenance (grass moving, pavement sweeping, and patching). Major maintenance contracted out.
Rescue, fire, safety, and environmental hazard control services	Rescue, fire, safety, and environmental hazard control services.	Provision of rescue fire service and airside services team. The airside services team monitor the safety of the apron, conduct runway checks, co-ordinate airside works, look after bird and hazard control, and monitor airside rules.	Rescue, fire, safety, and environmental hazard control services.
Airfield supervisory and security services	Provides and maintains security fencing and leases space to AVSEC.	Provision and maintenance of security fencing, perimeter patrols, and management of systems.	Provision and maintenance of security fencing and perimeter patrols.
Facilities/assets held for future airfield activities	Holding of land.	Residential properties bordering airfield.	Holding of Land.

5.129. The first requirement of section 52 is satisfied. The remainder of this report considers whether it is necessary or desirable for the prices, revenue, or quality standards of any of the goods or services identified above to be controlled in the interests of acquirers; and whether airfield activities should be controlled.

5.130. The following comments are sought in connection with the competition analysis presented in this chapter:

- Is the Commission's approach to determining whether section 52(a) is met correct?
- Are the markets appropriately defined?
- Do any additional markets require consideration?
- Is the Commission's assessment of the nature and scale of current competition in the supply of airfield activities correct?

- Is the Commission's assessment of the likelihood, timing, nature and scale of potential new entry in the supply of airfield activities correct?

- Is the Commission's assessment of the degree of constraint imposed AIAL, WIAL and CIAL by the acquirers of airfield activities—in terms of the ability of acquirers to substitute for the airfield activities provided at another airport—correct?

- Is the Commission's assessment of the price elasticity of demand for airfield activities at Auckland, Wellington and Christchurch International Airports correct?

- Is the Commission's assessment of the extent to which any countervailing power of the acquirers of airfield activities constrains AIAL, WIAL and CIAL—the ability of acquirers to exercise countervailing power correct?

- Is the Commission's assessment of the ability of current or potential competition to constrain AIAL, WIAL and CIAL correct?

- Is the Commission's view that the airfield activities supplied by AIAL, WIAL and CIAL are supplied in markets in which competition is limited correct?

6. PRICING PRINCIPLES

INTRODUCTION

6.1. The Commission considers that looking at the positive characteristics of a competitive market is an appropriate consideration in determining whether the requirements of section 52 are satisfied, and in whether control should be recommended. Critical structural characteristics of a competitive market are that there are: many buyers and sellers (with similar cost structures); and zero barriers to entry and exit.

6.2. Competitive markets lead to several important efficiency outcomes:

- The price paid by acquirers equals the marginal costs of supply (allocative efficiency).
- Each supplier earns only normal returns (*sine qua non* to allocative efficiency and the structural/behaviour characteristics of such markets).
- Each supplier minimises costs (productive efficiency).
- Strong incentives are provided to innovate in order to gain a competitive advantage (dynamic efficiency).

6.3. Monopolised markets represent an extreme situation of limited competition. Critical structural characteristics of monopolised markets are that there is; only a single seller; and high barriers to entry and exit. Monopolised markets may bring benefits if they are formed because of economies of scale and scope (i.e., the natural monopolies argument), but they are also prone to inefficiencies.[81] Inefficiencies include the following:

6.4. First, a monopoly is likely to face reduced incentives to cost minimise, when it does not face competition. For a monopolist who is not motivated by profit maximisation these incentives are likely to be reduced the most.

6.5. Second, a monopoly will try to raise prices close to the willingness to pay of acquirers. Economic theory suggests this may not be a cause for concern if that monopolist could perfectly price discriminate in the market in which it is operating.[82]

6.6. However, if a monopolist cannot price discriminate, they will restrict output to maximise returns. Such restrictions result in dead-weight losses.[83] In such

---

[81] Even where there are potential benefits in having a natural monopoly, other inefficiencies mean that the benefits are not maximised.

[82] In practice, a monopolist can have significant difficulty in determining acquirers' willingness to pay. Allen (1986) suggests that in determining acquirers' willingness to pay, an ability to price discriminate can encourage over-capitalising and the incurring of extra operation costs, since such costs can be recovered through changes to the various prices charged, or through additional charges. Bruce Allen, *Ramsey Pricing in the Transportation Industries*, International Journal of Transport Economics, Vol. 13, March 1986.

circumstances, evidence of returns being in excess of what may be considered normal would lead to a reasonable conclusion that allocative inefficiencies existed.[84]

6.7. Regardless of whether monopolies price discriminate, or not, if they earn returns in excess of what may be considered normal, they will cause a distribution of wealth in favour of themselves over acquirers, compared to a hypothetical competitive outcome.

6.8. The following sub-sections raise issues that are relevant for determining pricing principles in markets with limited competition.

FORMULATING PRICING PRINCIPLES

Allocative Efficiency

6.9. Allocatively efficient means the price paid by any user should reflect the costs which they impose. "First best" efficient pricing requires that users be charged a price equal to the marginal cost of supply. Marginal costs (MC) are the additional costs imposed by an additional unit of output being produced.

6.10. Where there are significant externalities associated with certain activities, MC pricing will not take account of all the costs and benefits to society. "Externalities" are those costs and benefit which fall on third parties. Marginal social costs (MSC) equals the marginal costs of production plus any costs borne by (or minus any benefits accruing to) third parties.

6.11. Marginal cost pricing does not allow for recovery of fixed costs or common costs. Fixed costs are costs that are static and do not change as a result of changes in output, for example the number of aircraft movements. However, these costs may change in the long-term as a result of future capital investments. Common costs are those costs incurred by the multi-product firm that are common to two or more outputs, and do not change whether one of those products is produced or not. They are generally fixed in nature, although some common costs may have some variability.

6.12. For suppliers with a high proportion of fixed costs, marginal cost is likely to be below average cost. This means that marginal cost pricing would not cover all costs. In addition, natural monopolies typically provide a conduit through which more than one product or service is provided. As a result, there are a substantial proportion of common costs, which also makes marginal cost pricing less desirable. If the airport is required to cover its costs, but receives no external subsidy, "first best" pricing will not be viable.

---

[83] There can also spill-over costs to related markets. For example, if the monopolised market is an input market, reduced output and high prices in that market could reduce competition or output in the final product markets.

[84] Regardless of whether monopolies price discriminate, or not, if they earn returns in excess of what may be considered normal, they will causes a distribution of wealth in favour of themselves over acquirers, compared to a hypothetical competitive outcome. This is not an efficiency concern in itself but a consequence of their behaviour.

6.13. In these circumstances, demand differentiated (e.g., Ramsey) pricing can represent a possible "second best" approach to determining prices that are as close as possible to the allocatively efficient level in these circumstances. This approach seeks to link prices paid by different acquirers to the demand characteristics of those acquirers.[85] They aim to recoup total accounting costs, while minimising the distortion to allocative efficiency caused by the departure from marginal cost pricing.[86] It relies on an ability to price discriminate between acquirers and the availability of information on acquirers demand characteristics.

6.14. Another "second best" approach to dealing with fixed costs is average cost pricing. Average costs are the average of the firm's total costs. Average cost pricing would be used where most fixed costs relate to long-term "lumpy" assets. This broad approach is simpler in practice, but less effective, in terms of promoting allocative efficiency, when compared to demand differentiated approaches.

6.15. Whether prices are at their most efficient level will depend, in part, on whether the appropriate level of fixed assets is being used to support production. Operating costs should also be minimised.

6.16. Prices should send appropriate signals to acquirers so that efficient use a firm's facilities are encouraged. Cross subsidisation should be avoided. Inefficient pricing would lead to acquirers over-, or under-, using the product or service.

6.17. An allocatively efficient price should be considered in the context of the quality of service demanded. A firm may try to improve profits by compromising on service quality. Product quality is a material consideration in terms of both allocative and dynamic efficiency.

Normal Returns

6.18. Underlying allocatively efficient pricing is an understanding that firms in competitive markets will earn normal profits, as a reward to the capital providers. Normal return should be based on a rate of return that is commensurate with risks faced and an appropriate level of costs and fixed assets.[87]

6.19. Any returns in excess of (less than) normal returns should reflect superior (inferior) performance. Costs should be evaluated based on day-to-day operation (productive efficiency) and the long-term decisions (e.g., investment decisions) companies make.

Productive Efficiency

6.20. Productive efficiency means meeting demand at the lowest possible costs. In the short-run this involves choosing and making best use of the appropriate level of

---

[85] Vickers, J., *Regulation, Competition, and the Structure of Prices*, Oxford Review of Economic Policy, Vol.13, No.1, 1997.

[86] Rigas Doganis, *The Airport Business*, London: Routledge, 1992. Baumol WJ and Willig RD, *Pricing Issues in the Deregulation of Railroad Rates*, 1983, p 92.

[87] This requires both productive and dynamic efficiency to also be achieved.

variable inputs. Productive efficiency also means the minimisation of transaction costs in the exchange of services.

6.21. Competition forces firms to minimise costs, subject to consumers' quality demands, or suffer the consequences. Regulatory mechanisms need to encourage productive efficiency, where competition is lacking.

6.22. A producer who faces limited competition in a market is normally considered to lack the competitive pressures to remain efficient in production, and to produce at minimum cost. Organisational slack may creep into its operations, bureaucracy may expand, principle-agent problems may arise, salaries may become inflated, and waste may occur, because a satisfactory level of profit is assured even when the firm is less than fully efficient. As a result, costs in general may increase. The increase in costs is a measure of the value of the resources being wasted, which in turn indicates the value of the output foregone by the economy as a whole from those resources not being employed productively elsewhere.

Dynamic Efficiency

6.23. Dynamic efficiency means maintaining allocative and productive efficiency over time. For industries where new and improved products and production processes could be expected to be introduced relatively frequently, dynamic efficiency is largely about introducing new and improved products and production processes as quickly as possible. For industries characterised by large long-term investments and slow innovation in new and improved products and production processes, dynamic efficiency is largely about appropriate new investment management.

Pricing Principles

6.24. Given the above considerations, the Commission is of the view that the appropriate pricing principles are as follows:

- Prices should be as close as possible to their allocatively efficient level over the medium term. Prices should be commensurate with the desired level of service quality and based on appropriate costs (productively, and dynamically, efficient costs). Prices should encourage efficient use of a supplier's facilities and avoid cross subsidisation. Today's consumers should only bear today's costs.

- Prices should allow for a "normal" rate of return to be earned by suppliers over the medium term. Normal returns should be based on an appropriately determined asset base and rate of return. Returns which are greater, or lesser, than this normal rate should reflect superior, or inferior, performance respectively.

- Prices should on average, over the medium term, cover efficient operating costs (including any temporary deviations resulting from unexpected changes in external factors), and no more.

- Prices should send appropriate signals for determining whether new investment (or divestment) would be efficient.

6.25. The above principles should not be seen as standing in isolation. They are interrelated considerations in evaluating the efficiency of a particular situation.

APPLICATION TO AIRPORTS

Relevant Airport Characteristics

6.26. The following provides a brief introduction to some of the key characteristics of airports. The issues raised as examined in more detail in the subsequent chapters.

Allocative Efficiency

6.27. The current regulatory approach in New Zealand may have prevented certain forms of discriminatory pricing by airports, such as charging various substantial customers differently, because of the incentive for substantial customers to negotiate collectively with airports. In addition, bilateral agreements often prevent discriminatory pricing by airports between different international airlines (whether they be domestic or foreign).[88] This suggests that there would be allocative inefficiencies if monopoly pricing was followed.

6.28. Airports have a high proportion of fixed costs and common costs. If an airport is required to cover its costs, marginal cost pricing will not be viable. Airports will have to cover their total costs.

6.29. Potentially efficient price discrimination can be practiced by airports in terms of aircraft type and by time of day. Demand differentiated principles have been used to apportion costs between users by using various physical indicators (e.g., MCTOW) that reflect differences in demand characteristics.

6.30. Ramsey pricing (a particular form of demand differentiated pricing) would involve setting the price for each user (or group of users) as a percentage mark-up on marginal cost, with the size of the mark-up being inversely proportional to the price elasticity of demand of that user or group of users. The mark-ups are scaled up until revenues in aggregate cover costs.

6.31. Determining elasticities of demand for airfield activities is difficult in practice. A practice frequently used by airports—including the subject airports—is to set runway charges in relation to the weight of aircraft, in proportion to each aircraft's MCTOW (albeit that weight bands are often used). A consequence is that charges reflects to some degree what users are willing to pay, with larger aircraft bearing a larger than average amount of the fixed and common costs. In other words, the MCTOW acts as a rough proxy for the inverse of the price elasticity of demand for runway use.

---

[88] The EU Commission recently concluded an investigation into discriminatory pricing between foreign and domestic airlines within the EU. At issue was a widespread practice whereby landing fees were systematically lower for domestic flights than for international flights regardless of the size of the aeroplane. The Commission believed this favoured domestic airlines over foreign airlines. A number of airports had to change their practice in this regard. DN: IP/01/673, Brussels, 10 May 2001.

6.32. Price discrimination based on time of day has not been practiced in New Zealand to date. Price discrimination by time of day could be efficient where there is constrained capacity at peak times.

6.33. Internationally there is frequently a debate over whether landing charges should be determined using a single-till or multi-till approach. A single-till approach would include consideration of the revenues earned in non-airfield activities in setting landing charges. A multi-till approach would not consider revenues earned outside of airfield activities in setting landing charges, only the costs and demands associated with airfield activities. The current approach at the three airports to determining landing charges is a multi-till approach.

6.34. There are two broad arguments in favour of the single-till approach. The first is that, because airlines bring the passengers to an airport, they should share in any potential positive externalities (e.g., being able to sell passengers other services or products) created by this. However, the Commission does not accept this argument as it is the airports who bear the costs and risks of realising these potential benefits. The other argument is that, by allowing airlines a share in revenues earned by airports in non-airfield activities, this could reduce the incentive for airports to monopoly price in any of those non-airfield activities that are non-contestable. Notwithstanding the debate of whether the incentive would be reduced (or simply both airlines and airports would share in monopoly profits at the expense of passengers, for example), this argument raises considerations that go beyond the scope of the Commission's inquiry. Given the above considerations, the Commission supports a multi-till approach to determining landing charges.

Normal Returns

6.35. As has been previously discussed, the demand for airfield services is highly inelastic. This suggests that significant price rises and excessive returns could potentially be achieved if airports chose to price at monopoly levels.

Productive Efficiency

6.36. The operating costs of airports are not as large as their fixed costs. Nonetheless, the costs are significant and the operational efficiency of airports, therefore, remains a key consideration in determining whether there are productive inefficiencies at the airports.

Dynamic Efficiency

6.37. It could be argued, that for airports investment planning represents a key criteria in evaluating their dynamic efficiency. Given the large, sunk, long-lived investments associated with airfield activities, and the fact that they often supply inputs into other industries, their investment behaviour is of critical importance. Over-, or under-, investment, which will have direct implications for congestion or over-servicing at airports. "Gold plating" of investments (i.e., service quality comes to exceed that demand by users) is also a relevant consideration, if it provides a justification for higher prices.

CONCLUSION

6.38. The pricing principles presented above provide a relevant framework in which the Commission can evaluate whether three airports are achieving efficient outcomes at normal returns.

6.39. Comments are sought in connection with the pricing principles presented in this chapter.

7. ASSET BASE

INTRODUCTION

7.1. Chapter 6 discussed pricing principles, addressing a number of issues surrounding pricing. In this chapter, asset valuation is examined—what is the value of the assets employed by the airports in providing airfield activities. Asset valuation is relevant both for the purposes of determining prices and assessing performance.

7.2. The value of assets is important to the determination of required revenue in two respects: it is the basis for determining the return of capital (depreciation charge), and cost of capital is applied to the asset value to determine the amount of revenue required to earn a return on capital. The higher the valuation, the higher the revenue (and charges) needed to generate the required return. The value of the asset base is a input into whether control of airfield activities is necessary or desirable in the interests of acquirers.

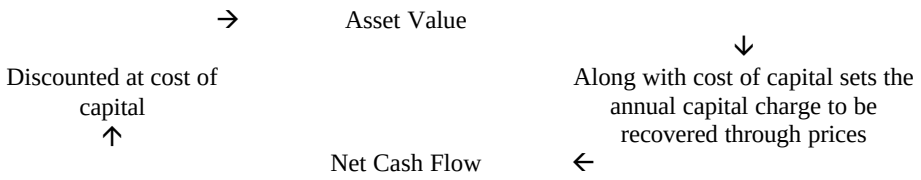
7.3. The Airport Authorities Amendment Act does not provide any guidance as to how airports should value assets.[89] However, some guidance is provided by economics, accounting, financial theory and previous decisions of the Courts.

7.4. In formulating its views expressed on asset valuation in this draft report, the Commission has obtained independent advice from valuers Telfer Young. A copy of their initial report to the Commission is included in appendix 11 to this report.

ASSET VALUATION METHODOLOGY

7.5. In competitive markets, prices are set independently of asset values and the current value of a business or an asset is able to be determined from the total present value of the cash flows it can generate—prices *determine* the value of assets. However, where markets are not competitive (as with airfield activities), prices *depend on* the value of assets. There is a circular problem if discounted cash flows are used to set prices, since prices will influence the level of expected cash flow, which in turn determines asset value. Chart 1 depicts this circularity problem.

Chart 1
Circularity Problem in Valuation and Pricing



7.6. In deciding upon an asset valuation methodology for airfield assets, the following questions are relevant:

---

[89] The Secretary for Transport may issue guidelines for the completion of disclosure financial statements with respect to the use of methodologies for valuation of assets. At present the Secretary has issued no such guidelines. The airport companies must disclose details of the methodology used.

- On what basis should assets be valued?
- To what extent should the asset base be optimised?
- When should new investment (assets) be included in the asset base?

Cost Concepts

Opportunity Cost

7.7. The cost of committing resources to any particular use is determined by the value of the resources in their best alternative use. By committing them to one use, all other possible uses are excluded. Some of these excluded uses are more valuable than others. It is the most valuable of them which is alone relevant to determining opportunity cost. Opportunity cost is defined as the highest alternative use value of resources used up or pre-empted.[90]

Replacement Cost

7.8. Replacement Cost (RC) is the cost of replacing an existing asset with a substantially identical new asset (based on current market values and technology). To some extent, it represents the cost to a new entrant, competing to provide the service.

7.9. A variant of RC is *Optimised Depreciated Replacement Cost (ODRC)*. ODRC is an estimate of the most-efficient, lowest-cost combination of assets (from an engineering perspective) which could replace the existing assets and offer the same utility. ODRC is calculated based on the gross replacement cost of modern equivalent network assets[91], adjusted for over design, over capacity and redundant assets, less an appropriate allowance for depreciation. It is a surrogate for valuing assets in their existing use where there are neither competitive markets for the assets or for their services or outputs.

Historic Cost

7.10. Historic Cost (HC) is the original cost of constructing or acquiring the asset recognised under generally accepted accounting practice. HC might be given by the book value of the assets, or the establishment value at the time of corporatisation or privatisation. In practice, historic costs are usually depreciated.

---

[90] Solomon, D., *Economic and Accounting Concepts of Cost and Value*, Chapter 6 of *Modern Accounting Theory* edited by M Backer, 1966, p 127.

[91] The gross modern equivalent asset value is what it would cost to replace an old asset with a technically up to date new one with the same service capability, allowing for any differences both in quality of output and in operating costs.

Potential Considerations

7.11. It is suggested that, between historic cost and replacement cost, there is a range of permissible valuation methods for the pricing of monopoly services. To determine where the actual valuation falls within that range for pricing purposes, Australian regulators have considered the following case-specific factors:

- The advantages and disadvantages of each valuation methodology.
- The basis on which prices have been set in the past, the economic depreciation of the asset, and the historical returns to the service provider.
- The reasonable expectations of persons subject to the regulatory regime.
- The price paid for (and the circumstances surrounding) recently purchased assets.[92]

7.12. On corporatisation, airfield assets were vested (sold) to the airport companies at values determined by Government (based on independent valuations).[93] Initially at least, the basis on which prices were set was the vesting values (historic costs). It is far from clear whether the airports had expectations of basing prices on alternative values—whether at the time of corporatisation or privatisation, pricing based on revalued assets was acceptable. The Government had neither endorsed or prohibited such an approach.[94] Since corporatisation, all three airports have moved to base prices on current replacement costs.

Which Approach?

7.13. In economic decision making, the relevant costs are opportunity costs. The cost of an input or asset (henceforth collectively called a "resource") in one use is what is forgone ("the return") by not then being able to employ it in an alternative use. Since resource owners are assumed to want to maximise the returns they get from the employment of a resource, its opportunity cost becomes the return they forgo from its not being employed in the next best alternative use.

7.14. For durable assets, the 'cost' is that opportunity forgone, rather than the amount of money that may have been paid for it at some time in the past—its so-called "historic cost". In an inflationary environment, and in the absence of significant technological advance that would render the resource obsolete (and ignoring depreciation), it is likely that the opportunity cost of an asset will exceed its historic cost. In these circumstances, the historic cost becomes misleading as a guide to resource allocation; the current valuation based upon opportunity cost should be used.

---

[92] Recent sales evidence of airport assets includes the flotation price of AIAL, the sales price of the Crown's share in WIAL, and sales of long-term leases for Australian airports. These prices are of limited usefulness in assisting in determining the value of airfield assets.

[93] The accuracy of these valuations is not considered. The values are accepted as historic costs.

[94] The Government had merely required the use of Optimised Deprival Value for the purposes of assessing the performance of electricity companies.

7.15. However, a problem arises when an asset, is 'sunk'; that is to say, it is so specialised that it has no significant alternative use. Once the investment has been made, the cost cannot be recouped by re-selling the asset, except as for scrap. In such instances, the opportunity cost of the asset is very low, as the owner forgoes very little by employing the asset in its present use. Including the asset in the asset base for pricing purposes at its opportunity cost would not enable the asset owner to recover their costs and would discourage future investment in sunk assets. Another approach is likely to be required (in order to allow costs of be recovered), the possibilities being replacement and historic cost.

7.16. The question of the appropriate methodology is dealt with in two parts: the valuation of specialised airfield assets (such as runways, taxiways and aprons) and the valuation of airfield land.

Valuation of Airfield Land

7.17. Land's permanence means that it will normally be expected to outlive those uses and those improvements imposed upon it by mankind. It does not depreciate and is not subject to technological obsolescence. Furthermore, unlike some other airport assets, it has an alternative use—it is not specialised (does not have a specific use)—and has an opportunity cost greater than zero.

7.18. In a recent decision on a pricing proposal from Sydney Airports Corporation Limited (SACL), the ACCC made the following comment with regard to the use of opportunity cost to value land:[95]

> In a competitive market, land will generally be put to its highest value use. If not, then the opportunity cost of the land will be greater than the value in its current use and the owner will have an incentive to use the land for the higher value alternative, or sell the land to another party who will use the land for the higher value alternative.

7.19. Opportunity does potentially exist for airfield land to be used for some other use. Unlike some overseas airports (Los Angeles and Australian airports[96]), there is no legal obligation that any New Zealand airport remain an airport. The major impediments to any airport company seeking to use airport land for alternative uses are the Public Works Act 1981, resource and planning restrictions, and shareholder approval. While it is unlikely (in the foreseeable future) that an airport company would realise any opportunity to use airfield land for an alternative use, an opportunity does potentially exist.

7.20. Valuing airfield land at opportunity cost provides appropriate signals to either continue operating the land in its existing use (as an airfield) or to put the land to

---

[95] Australian Competition and Consumer Commission, *SACL Aeronautical Pricing Proposal*, Final Decision, 2001, p 133.

[96] The operators of LAX are forbidden from converting the airfield land to rental property, giving them no opportunity to use the land in any other capacity other than as an airport and have made a commitment to continue to use LAX as an airport. A condition of the leases of Australian airports and section 31(2) of the Australian Airports Act 1996 is that airport land be used as an airport.

alternative use and relocate the airport. It also provides the appropriate incentives for new investment.

7.21. It is recognised that an historic cost valuation would generally be more readily identifiable than opportunity cost. However, the prices resulting from an historic land valuation may send poor signals for the efficient use of land and limit an airport operator's ability to effectively manage congestion.[97]

Determining the Opportunity Cost of Land

7.22. Opportunity cost is the appropriate way to value airport land. The real issue is the question of how to determine the opportunity cost. There are two broad approaches to estimating the opportunity cost of land (which will theoretically be comparable if all costs have been accurately accounted for):

- Assessment of the next best alternative use of the airport land.
- Estimated cost of alternative land in the region.

7.23. The relevant questions to ask are: What is the cost of all land and facilities needed to supply airfield activities on a sustainable basis? If the airfield (or part of it) were to be put to some alternative use, what is the market value of the existing airfield assets if they were disposed of to the highest bidder?

7.24. Historically, airfield land has often been compulsorily acquired as "public works". Some of the airfield land that was transferred to the airport companies from the Crown and local authorities in the late 1980s and early 1990s is, therefore, subject to the offer back provisions of section 40 of the Public Works Act. This means that if the airport companies no longer require any such land for use as an airfield, they must (before selling the land) offer the land back to the former owners (or their successors) unless the land is transferred to another public work.

7.25. The offer back provisions are intended, in the interests of fairness, to restore an owner to their former position.[98] The land is required to be offered at the current (open) market value of the land (as determined by an independent valuer) unless grounds exist to make the offer at a lesser price. Other than this, the Public Works Act provides no guidance as to how market value should be determined. Court cases in connection with the offer back provision suggest that the land should be valued based on its underlying zoning at the time of offer back, but that due allowance can be made for the possibility that land may be rezoned.[99]

---

[97] Australian Competition and Consumer Commission, *SACL Aeronautical Pricing Proposal*, Final Decision, 2001, pp 141-142.

[98] *McNicholl v Auckland Regional Authority* 10 TCL 13/6 (1986) BCL 266 CCA (2nd) H-15.

[99] *McLennan v Attorney General* M267/98 unreported; *Valuer General v Treadwell* (1969) NZLR.

7.26. It is noted that section 40 of the Public Works Act 1981 provides exemptions to the offer back requirement:

- The land may be sold to an owner of land adjacent to the airfield where the airport company believes on reasonable grounds that, because of the size, shape, or situation of the land, the land could not be expected to be sold to any person who did not own land adjacent to the airfield land.

- The land does not have to be offered back to the former owners (or their successors) where the airport company considers either (a) that it would be impracticable (not capable of being put into practice), unreasonable or unfair to have to, or (b) that there has been a significant change in the character of the land for the purposes of its use as an airfield.

7.27. The existence of the offer back provisions may, to a large extent, dictate the next best alternative use of the airport land and, therefore, opportunity cost.

Airports' Approach to Determining the Opportunity Cost of Land

7.28. The airports' current valuations have aimed to reflect:

- The land's existing or potential use as an airport.

- The current market buying price of the land in its current use.

- Current reproduction cost of the same service potential or future benefits of the existing asset.

7.29. The valuations are based on an optimised replacement cost (ORC) approach, which determines an estimate of the market valuation of the land which reflects the value of the site as an airport, rather than in an alternative use. *Market value for the existing use* is defined as the market value of an asset based on continuation of its existing use. It is the value a specific property has for a specific use to a specific user.[100]

7.30. Possible approaches to determining and validating the market value existing-use of the land are:

- *Zone approach* – groups the land according to location, physical characteristics and use, and assesses a value for each zone derived from comparable market sales.

- *Bottom-up approach* – rural land values are determined, and then adjusted for planning, holding and development costs to equate market value as airport land.

- *Top-down (hypothetical subdivision) approach* – a residual value assessment is made of a hypothetical subdivision of the land in alternative use. A similar approach was used by WIAL and SACL.

---

[100] New Zealand Institute of Valuers *Valuation Standards*.

- *Purist hybrid approach* – treat the reclamation as a civil work (since that is what it was originally) and value the remaining airport land in accord with its original boundaries on an appropriate basis

7.31. In the absence of any direct comparable sales evidence of operational airport land values, the airports' approach to land valuation has tended to involve a building blocks approach.

- The first step is to determine the cost which the airport would incur to acquire an equivalent parcel of land with similar locational attributes and amenity on the open market in order to develop an equivalent international airport.

- The second step is to then add the additional costs that the airport would need to incur to enable the land to be used as an airport (allowing for holding costs and site preparation costs).

7.32. The airports' approach is argued to be the cost that a new entrant airport could expect to have to pay to acquire the equivalent land in order to provide a similar service and, is argued to be consistent with the outcome in a competitive market. The value of airfield land is determined by calculating the amount which the airport companies would need to pay in the market to match the price which an independent purchaser could afford to pay to acquire an equivalent parcel of land to undertake a hypothetical highest and best use alternative development, plus the cost to get the land to airport usage, but excluding the costs of any airport improvements. The resulting land value includes the realistic cost of getting the land to airport usage—the costs and benefits of moving, and of building the new airport.

Conclusion on the Valuation of Airfield Land

7.33. The Commission's preliminary view is that airfield land should be valued based on opportunity cost. The airports' approach of measuring land value as the realistic cost of getting the land to airport usage—the costs and benefits of moving, and of building the new airport is not appropriate. Land value should not include the cost of getting the land to a stage where it could be used as an airport. Such costs should be included within the costs of any land improvements, such as runways, taxiways and aprons. However, due to lack of information, the Commission has not included any adjustment for such costs in its asset base.

7.34. Opportunity cost should be determined based on the highest alternative use value of resources used up or pre-empted. A zone approach is the preferred primary valuation option.

7.35. The relevant alternative use may vary between the airports and may depend on the underlying zoning of the land. Potential alternative uses are residential, commercial, industrial and rural. The airports have made various assumptions regarding the alternative uses of airport land. The alternative use will to some extent depend on the underlying zoning of the airfield land.

Valuation of Specialised Airfield Assets (Runways, Taxiways and Aprons)

7.36. 'Infrastructure assets' are stationary systems (or networks) that serve defined communities where the system as a whole is intended to be maintained indefinitely to a specified service level by the continuing replacement and refurbishment of its components. Many infrastructure assets are specialised assets.[101] *'Specialised assets'* are defined in the NZ Institute of Valuers (NZIV) Valuation Standard 2 as:

> Specialised, special purpose or specially designed property…which…has utility restricted to particular uses/users, and is rarely, if ever, sold on the open market, except as part of a sale of the business in occupation,…restricted or no markets…

7.37. Airfield sealed surfaces are good examples of specialised assets as they have "a utility which is restricted to particular uses" and "rarely, if ever, traded" other than as part of the sale of an entire airport (or the shares thereof). For the bulk of such assets, there is no established market and, therefore, no comparable sales or market evidence by which the individual assets can be valued.[102]

7.38. Practicalities may make valuation at opportunity cost impossible or undesirable for specialised airfield assets. In the case of sunk assets, opportunity costs are non-existent. Such assets are being used in their best use, and there is no alternative use. The cost of specialised airfield assets are sunk and cannot be recovered if the service is discontinued. For such assets, opportunity costs are zero. However, valuing the assets at zero may affect the long-term viability of owner of the assets. Airports need to be able to recover the costs of, and earn a return on, specialised airfield assets in order to preserve the incentives to continue to invest in them.

Historic Cost or Replacement Cost?

7.39. Table 22 provides the arguments for and against the use of historic cost:

Table 22
Arguments For and Against the Use of Historic Cost

For (F)	Against (A)
F1. Book values are robust, and easily ascertained (BUT: see A1, A2 and A3).	A1. Book value is based on the particular accounting standards of an organisation and the prevailing accounting standards. This makes for poor consistency between companies.
F2. Use of book values ensures that investors are fully compensated for their investments in the assets, and no more.	A2. Book values represent an incompatible accumulation of historical valuations of assets purchased at different times in the past—a different time pattern of purchases would result in a different total asset valuation, i.e., low "consistency" across companies. This provides a poor guide on whether monopoly profit is being earned (BUT: see F2).
F3. Book values could be adjusted to "optimise	A3. In some cases, such as electricity lines

[101] National Asset Management Steering Group, *International Infrastructure Management Manual*, Australia/NZ Edition, version 1.0, p 3.

[102] Horsley Graeme and Seed Peter (Ernst and Young), *Airport Valuation*, issue 2 of real estate papers, p 4.

For (F)	Against (A)
out" uneconomic or redundant assets (optimisation raises an issue as to what extent business should be "penalised" for past investment decisions, particularly where the decision to optimised is made with the benefit of hindsight, rather than based on the information that existed at the time that the decision to invest was made).	businesses in 1993, the asset records were deficient and used inconsistent assumptions about depreciation.
F4. Users pay for the assets that they are actually using (subject to F3). Future users should pay for new assets to be acquired in the future (BUT: see A5).	A4. Book value can be inflated by the inclusion of the costs of uneconomic or redundant assets (BUT: see F3).
F5. In an inflationary environment, nominal interest rates, by incorporating an "inflation premium", provides some compensation to investors for what would otherwise lead to a loss in the real values of their investments (BUT: see A6). (differences in inflation across different industries would not be compensated for by inflation premium in interest rates.)	A5. In an inflationary environment, a return on the historic cost of assets would likely generate insufficient revenue for asset maintenance, replacement and expansion—companies have not made a real profit until they have provided for the replacement of their assets (BUT: see F4 and F5).
F6. For a regulated business, the compliance costs of providing information on asset values would be very low.	A6. In an inflationary environment, using the original purchase price of the asset leads to an understatement of depreciation in real terms (BUT: see F5).

7.40. Table 23 provides the arguments for and against the use of ODRC:

Table 23
Arguments For and Against the Use of ODRC

For (F)	Against (A)
F1. The ODRC of existing assets is the cost of modern equivalent assets, and therefore provides an "objective" measure of the valuation of assets, against which the performance of the company can be assessed (BUT: see A1).	A1. ODRC methodology leaves considerable discretion on the hands of companies on valuations, particularly with regard to "optimisation", valuation of assets and asset lives. See also A7.
F2. ODRC prevents inappropriate upward valuations of assets and strips out any redundant or over-engineered assets. The entity cannot be over-valued in relation to the required level of services. Investors remain responsible for errors of judgement (BUT: see A1 and A2).	A2. The correct comparison for a past investment is not the modern equivalent asset now, but rather the modern equivalent asset at the time when the investment was made (investors cannot be held responsible for errors only evident with the benefit of hindsight). That would be difficult to assess.
F3. In a contestable setting, ODRC provides the maximum or "bypass" valuation of assets. If assets were valued above ODRC, and prices were set accordingly, the incumbent would invite an entrant to replicate the system. Hence, ODRC is the maximum value under non-monopoly conditions (BUT: see A3).	A3. It is not clear why prices should be based on bypass valuations of assets. Where ODRC includes sunk costs that have been already written off, the resulting "high" prices could encourage inefficient bypass. In any case, competitive markets with lumpy assets would cycle between low prices when there is excess capacity, and high prices when additional capacity is needed.
F4. Following on from F3, the ODRC valuation methodology underpins a light-handed approach to regulation where prices are (implicitly) capped so as to generate normal returns only (BUT: see A4.).	A4. Normal returns can be earned on any assessed valuation of asset base. Moreover, prices could rise above the bypass prices if, as likely, there are entry barriers.
F5. ODRC results in assets being assigned a	A5. For a regulated business, the compliance

For (F)	Against (A)
current value, thus resulting in a moderate to high "consistency" between companies (after allowing for A1). This was originally intended to allow comparisons between electricity lines businesses, but such comparisons have been frustrated by other substantial differences between them.	costs of providing information on ODRC-based asset values are assessed as "moderate", i.e., higher than for historic costs. This may be optimistic, given ongoing revaluations. In addition, economic values have to be assigned to uneconomic parts of the business.
F6. By allowing a regulated firm to recover (with profit) the ODRC valuation of its prudently incurred investments in assets assures the sustainability of the entity—prices can be set at levels that guarantee the funds required for replacement (BUT: see A6).	A6. Sustainability is assured where the firm is able to recover (with profit) the costs of prudent investments—there is no need for firms to amass cash reserves now to finance all future replacements and refurbishments. Moreover, ODRC is *not* sustainable where technological improvements are lowering the cost of modern equivalent assets (the ODRC will decline faster than the book value).
F7. ODRC valuations of assets include sunk assets. This preserves the incentive to invest in sunk assets in the future (BUT: see A7).	A7. There is no economic rationale for including the costs of sunk assets where those have already been written off (e.g., pre-corporatisation sunk costs). Moreover, any return on a sunk asset is an economic "rent", and consequently is a "transfer" and not a "cost"—the size of the return has to be determined on non-efficiency grounds
F8. ODRC valuations of assets at the outset would avoid rises in price for purchasers of the service in the future when assets are replaced (BUT: see A8). Such rises could be "disruptive".	A8. F8 can be countered as follows: • ODRC can lead to a big price rises at the outset. • This results in a windfall gain to producers at the expense of acquirers. • Faced with the options, acquirers would prefer a later price rise to an earlier one. The alternative would be to allow prices to increase as new investment is needed on a "pay-as-you-go" basis, a process which might take decades, would benefit users, and would be sustainable for owners.

7.41. ODRC is argued by its proponents to have efficiency advantages in terms of:

- Mirroring conditions in a competitive or contestable market inasmuch as the firm does not make a return on inefficient investments arising from choosing not to reconfigure assets to reflect best commercial practice.

- Minimising the likelihood of a significant shock to the tariff when it comes time to replace the assets.[103]

7.42. However, the above tables suggest that ODRC does not have any clear advantages over historic cost.

7.43. While the use of ODRC smoothes prices (to some extent), it explicitly involves an element of pre-financing. In accepting ODRC, today's consumers will pay for some of tomorrows costs. However, there is no guarantee that any pre-financing of future replacement is set aside and kept for that purpose and current users have no

[103] Note that even with ODRC, prices will not be totally smooth, as assets will regularly be revalued.

guaranteed rights in the future. Given that pre-financing (of the replacement of currently used assets) is seen as undesirable, then HC is probably the preferable approach. The Commission considers that HC provides investors with a return on the amounts previously invested and preserves incentives to invest in the future.

Depreciation

7.44. The ACCC's position is that assets that do not need to be replaced should have depreciation allowances reduced to zero. In its recent decision regarding SACL, the ACCC determined that only the top layer of SACL's runways, taxiways and aprons (the concrete or asphalt) was likely to ever need replacing. The middle layer of compacted rock aggregates (known as the base course) and lower layer of foundation soils (known as the sub-grade) were not considered to physically deteriorate and did not need depreciating.[104]

7.45. The Commission's preliminary view is that only assets that experience obsolescence or deterioration should be depreciated. It is noted that runways and taxiways—subject to the service being properly maintained—do have long economic lives.

Conclusion the Valuation of Specialised Airfield Assets

7.46. The Commission's preliminary view is that specialised airfield assets should be included in the asset base at historic cost. The assets should also be depreciated and optimised as appropriate. The justification for the use of replacement cost runs contrary to the Commission's view that today's acquirers of airfield activities should only bear today's costs. Historic cost is consistent with the fundamental principles adopted by the Commission. HC provides investors with a return on the amounts invested and preserves incentives to invest in the future. Chapter 8 provides for investors to be compensated for inflation through the use of a nominal WACC.

Optimisation

7.47. A condition for efficient pricing is that the costs that should be recovered through pricing are those that reflect the least cost production or "efficient production".

7.48. In certain instances there will be assets that are not needed. These assets should be optimised and removed from the calculation of price. To prevent moral hazards (lack of responsibility) emerging for poor investment decisions, such costs should generally not be recoverable through pricing. So as to not discourage innovation, decisions to optimise assets should consider whether the decision to invest was poor at the time it was made, and not relay on the benefit of hindsight. "Optimisation" involves the adjustment of replacement cost to reflect changes in the required deployment or scale of the assets to achieve the same level of services.

7.49. The Commission's preliminary view is that only "used and useful" assets should be included in the asset base on which a rate of return is calculated. All other assets

---

[104] Australian Competition and Consumer Commission, *SACL Aeronautical Pricing Proposal*, Final Decision, 2001, p 112.

should be optimised out. The varying degrees of optimisation are depicted in the table 24:

Table 24
Degrees of Optimisation

Degree of Optimisation	Adjustment
Minimal	None
Low	Surplus assets eliminated
	Technological obsolescence eliminated[105]
	Over-design eliminated
↓	Site re-configuration
High (least constrained)	Changed location
Extreme	"Greenfields" approach[106]

7.50. In its recent decision on SACL, the ACCC determined that, in the absence of an ability to develop a greenfields alternative in the time frame of the current regulatory period, a brownfields (rather than greenfields) level of optimisation represented an efficient benchmark for SACL's assets. It was also consistent with the valuation of land in its current location. The Commission's preliminary view is to support the ACCC's approach.[107]

Runway Length

7.51. Clearly, any runway area surplus to requirements should be optimised out. In this regard, the Commission has explored the possibility of whether there is any excess runway capacity at any of the three airports. The Civil Aviation Authority's advisory circular AC139-06A states that runway length:

- Should be adequate to meet the operational requirements of the aircraft for which the runway is intended.

- Should not be less than the longest length determined by applying the corrections for local conditions to the operations and performance characteristics of the relevant aircraft.

7.52. Simply, enough runway length should be provided to ensure an economic take-off weight related to the routes to be flown from the airport. The runway lengths of Auckland, Wellington and Christchurch International Airports are required for the largest aircraft and the longest routes currently operating from each airport. There is generally very little "spare" runway length, and what might be considered "spare" is needed in adverse weather conditions. The Commission has, therefore, not optimised out any of the sealed surfaces of the airports.

---

[105] Here, obsolescence is changes in aircraft technology and requirements for landing and takeoff.

[106] Greenfields optimisation assumes the capacity to design and build an entirely new optimal network of assets for the entity, regardless of historical constraints which may have applied to the real network—a completely new optimal airport. In contrast, brownfields optimisation involves progressive or incremental replacement of assets in the normal course of business, retaining the historical configuration of the assets, but replacing under-utilised and removing redundant assets—an airport on the current site.

[107] Australian Competition and Consumer Commission, *SACL Aeronautical Pricing Proposal*, Final Decision, 2001, p 106.

Seabed

7.53. The airlines have argued that the land relating to the seabed (Western approaches and Pukaki Creek) at Auckland International Airport should be optimised out as it is not required for operational reasons. AIAL has argued that the seabeds should be included on the grounds that it protects airport operations and it is appropriate for the following reasons:

- Given the opportunity, it would be reasonable that AIAL would acquire the seabed in order to protect aircraft access and for the added flexibility such as reclamation to increase required land holdings.

- Assuming some alternative location, in the absence of a similar seabed, AIAL would likely be required to acquire additional land of an equivalent value to the main holding to protect flight paths.

- If the seabed had not been available to AIAL it may have been required to acquire additional land of an equivalent value to protect the operational areas of the airport.

7.54. The seabed approaches at Auckland International Airport are flown over by aircraft when landing and/or taking off from the airport. In this regard, they are no different to the approaches across the sea at Wellington International Airport. The only difference is that AIAL happens to own part of the seabed. If the seabed land is included in AIAL's asset base, it should be included at its opportunity cost (which is zero). However, there is a strong argument for optimising the seabed out in its entirety. In its present form, the seabed is not needed for operational purposes. Statutory planning documents are in place which provide adequate protection, without the need for AIAL to own the land. It has, therefore been excluded from the asset base. In its final decision on prices, AIAL optimised out part of its seabed. The Commission has optimised out the remaining seabed.

Seawall

7.55. Given that the runways at Auckland and Wellington International Airports are bounded in part by water, and partially lie on reclaimed land, seawalls are in place to guard against erosion of the land. AIAL has separately included its seawalls in its recent asset valuation. The Commission considers this approach to be incorrect. The seawalls are essential to the existence of the land and form part of the value of the runway land (given the approach to land valuation adopted). They do not have a separate value, but must otherwise be subsumed in the land value. The Commission has, therefore, excluded the seawall value from the asset base for AIAL.

Land Held for Future Development

7.56. The definition of airfield activities (in the Airfield Authorities Amendment Act 1997) includes "{t}he holding of any facilities and assets (including land) acquired or held to provide airfield activities in the future (whether or not used for any other purpose in the meantime)". Both AIAL and CIAL hold land for future development of their airfields. AIAL considers that land held for future use that is associated with current

operations can be included in the asset base where there is an intention (and reasonable certainty) to use the land at a future date for operational purposes. CIAL has submitted that the extent to which land held for future development should be included in the current pricing depends upon the current management of the land by the airport company. It has excluded the revenue currently derived and the costs associated with development land in determining the prices for airfield activities.

7.57. It is noted that section 5 of the Airport Authorities Act 1966 (as amended in 1986) states that any development or reconstruction of an airport deemed by the Minister of Finance to be of both "national and local importance" is covered by section 224 of the Public Works Act 1981, which allows land to be taken or acquired. The airport companies are able to approach the Minister of Lands seeking an order—and the Minister's agreement—that land be compulsorily acquired for the airport. Given this, the airports do not necessarily have to hold land for future development, but may make business decisions to do so if its considered beneficial.

7.58. While, the statutory definition of airfield charges specifically provides that land acquired or held to provide airfield activities in the future is included within the definition, it does not follow that it is included in the asset base for determining today's prices of airfield activities. The Commission's approach means that a return should generally not be sought from airfield users on any land held for the development of airfield activities.[108] Airports should bear the risks of not anticipating future demand correctly. There may be an argument for airports acquiring and holding land for development (and including it in the asset base) if the opportunity comes up to buy a block of land that may not come up again and could not be acquired under the Public Works Act.

Conclusion on Optimisation

7.59. The Commission's preliminary view is that the seabed at AIAL and any land held for development should be optimised out. The seawall values are also excluded from AIAL's asset base for the reasons noted above. Other assets are "used and useful" and do not need to be optimised out, although the values attached to them are revisited.

New Investment and Pre-Financing

7.60. Growth in aircraft movements will require investment in additional runway capacity at airports from time to time. Future demand by users is uncertain and is not guaranteed. Airport companies must make decisions to invest in additional capacity despite these future uncertainties. It may not be desirable for airport companies to delay investment until demand exceeds capacity. Equally, it is not likely to be desirable from an efficiency perspective for airport companies to over-invest in facilities.

7.61. Decisions on future investment are important for dynamic efficiency. Ideally investment planning should aim to make sure there is an appropriate level of

[108] It is recognised that, in many instances, the airports receive revenue from the current use of the land (such as farming).

investment to support production, i.e., no excess, or under, capacity. Any new investment should be based on reasonably anticipated future demands.

7.62. Useful principles have recently been outlined by the Board of Airline Representatives Australia:[109]

- Sufficient incentives should be provided to invest in facilities in the future.
- Entities should be discouraged from investing in excess capacity and/or gold-plating assets.

7.63. Expansions in airport capacity can be 'lumpy'. Assets will initially be over-sized to accommodate future demand growth, and as demand grows so the pressure on capacity will increase until capacity is expanded. The Commission's preliminary view is that the pre-financing of new investment is generally inappropriate—only "used and useful" assets should be included in the asset base. This should encourage airports to only undertake new investments that will be "used and useful".

7.64. Exactly when (and to what extent) the current and future users of airfield activities (the airlines) should pay for any investments is considered by grouping new investment into three categories:

- Investment that is in progress.
- Investment that is forecast by an airport company over the period for which prices are being set, but yet to be commenced.
- Investment that may possibly occur at some point in the future beyond the for which prices are being set.

In Progress

7.65. With regard to assets under construction, both WIAL and CIAL have in recent years capitalised the value of work in progress. As noted in chapter 4, over the period 1 April 1992 to 1 July 1996, AIAL increased its landing charge for international aircraft over 40 tonne by $0.30 per tonne to assist in the development of its international terminal building. Currently, AIAL is in the process of reconstructing its existing runway.

7.66. The Commission's preliminary view is that as a broad principle only "used and useful" assets should be included in the asset base. Although, the cost of new investment in land that is eventually included in the asset base should include the capitalised costs of financing construction and any holding costs of land (less any revenue that may have been derived from former use of the land) up to a cap of opportunity cost.

---

[109] Comment by BARA at *Sydney Airport Public Discussion Forum* held by Australian Competition and Consumer Commission, 2000, p 43.

Planned in Next Five Years

7.67. Issues surrounding planned but yet to be commenced investment (that is to be commenced during the period for which prices are being set) are tied in with the determination of reference revenue and prices. In preparing five year forecasts, the airports have incorporated forecasted capital expenditure. As noted in chapter 3, the Airport Authorities Amendment Act requires the airports to consult with substantial customers on any on capital expenditure plans in relation to airfield activities which are likely, within the following five years, to exceed 20% of the value of the company's assets in respect of identified airport activities.

7.68. The Commission would expect airport companies to consult—at the time of setting charges—on any planned capital expenditure. This being the case, the estimates included in five year forecasts should reflect the airlines' views on an airport's proposals. This should encourage sound investment proposals.

7.69. As with capital expenditure that is in progress, the Commission's preliminary view is that as a broad principle only "used and useful" assets should be included in the asset base.

Possible Future Investment

7.70. The Commission's preliminary view is that investment that may possibly occur at some point in the future beyond the period for which prices are being set should typically not be included in the asset base. A return on such investment should not be sought until the assets involved are "used and useful".

Appropriate Methodology for Asset Valuation

7.71. The Commission's preliminary view is that the determination of the asset base for airfield assets should be based on the following principles:

- Specialised airfield assets should be valued at historic cost.
- Airfield land should be valued at opportunity cost
- Historic costs should be depreciated to reflect any remaining useful life (reduction in utility) of the assets. Assets that have infinite lives such as land are not depreciated. Other properly maintained assets may not reduce in utility, and may not need to be depreciated.
- Airfield assets that are not "used or useful" should be optimised out.
- The costs of investments in new capacity should only be included in the asset base when the airfield assets become "used or useful". The cost of new investment in land that is eventually included in the asset base should include the capitalised costs of financing construction and any holding costs of land (less any revenue that may have been derived from former use of the land) up to a cap of opportunity cost.

7.72. These principles are now used to examine the asset valuations adopted by the airports.

ASSET VALUES

7.73. It should be recognised that value is not a fact, but an estimate of the worth of goods and services at a given time in accordance with a particular definition of value.[110] Any valuation is no more than an opinion of value. In theory, if the valuation process is rigorously undertaken, then the resulting valuation should be acceptable and reliable. The Commission has obtained an independent peer review of the most recent airfield land valuations to determine the appropriateness of the valuations adopted by the airports. The advice received has been incorporated into the Commission's views on asset base. The values arrived at by the Commission also incorporate its preliminary views in respect of optimisation and investment.

7.74. The adopted land values take account of the current zoning of the airfield land at each airport.

7.75. The difference in per hectare land values across the airports are largely due to location.

Auckland

7.76. Based on the Commission's views of asset valuation, the value of AIAL's airfield assets as at 30 June 2000 are estimated at $186 million.

7.77. The asset base determined by the Commission takes account of the revised figures adopted by AIAL for pricing purposes, as distinct from its most recent valuation report. For pricing purposes, AIAL partially optimised out the seabed and transferred part of the second runway land to other airport activities.

7.78. The remaining land held for development of a possible second runway at Auckland International Airport has been optimised out of the asset base, as has the remaining seabed and the separate seawall value.

7.79. The detailed calculation of the asset base is included in scenario 8 of appendix 8. Table 25 summarises the adjustments to the airports valuation to arrive at the Commission's assessed value:

Table 25
AIAL Airfield Asset Base

	Amount ($000s)
AIAL Valuation 30 June 1999	$ 312,751
Adjustments by AIAL for Pricing Purposes 2000	-27,504
Optimisation of Seabed	-9,800
Optimisation of Seawall	-2,101
Optimisation of Second Runway Land	-36,757
Adjustment to Sealed Surfaces Value (ODRC to HC)	-49,773
Commission Asset Base	186,816

[110] New Zealand Institute of Valuers *Valuation Standards*.

Wellington

7.80. Based on the Commission's views of asset valuation, the value of WIAL's airfield assets as at 30 June 2000 are estimated at $68 million. There has been no optimisation of WIAL's asset base.

7.81. The detailed calculation of the asset base is included in scenario 3 of appendix 9. Table 26 summarises the adjustments to the airports valuation to arrive at the Commission's assessed value:

Table 26
WIAL Airfield Asset Base

	Amount ($000s)
WIAL Valuation 31 March 2000	$ 96,387
Adjustment to Exclude Work in Progress	-1,177
Adjustment to Sealed Surfaces Value (ODRC to HC)	-26,407
Commission Asset Base	68,803

Christchurch

7.82. Based on the Commission's views of asset valuation, the value of CIAL's airfield assets as at 30 June 2000 are estimated at $34 million.

7.83. The asset base determined by the Commission takes account of the revised figures adopted by CIAL for pricing purposes, as distinct from its most recent valuation report. For pricing, CIAL has appropriately excluded the land held for development of the airfield at Christchurch International Airport from the asset base

7.84. The detailed calculation of the asset base is included in scenario 6 of appendix 10. Table 27 summarises the adjustments to the airports valuation to arrive at the Commission's assessed value:

Table 27
CIAL Airfield Asset Base

	Amount ($000s)
CIAL Valuation 30 June 1999	$ 41,930
Adjustments by CIAL for Pricing Purposes 2000	-381
Adjustment to Sealed Surfaces Value (ODRC to HC)	-13,491
Add back of Reseal Reserve	6,633
Commission Asset Base	34,691

CONCLUSIONS

7.85. As stated by the Court of Appeal in the WIAL case:[111]

[111] *Air NZ Ltd v Wellington International Airport Ltd*, CA 23/92, 24 September 1992, partially reported (1993) 1 NZLR 671.

> The legislation clearly intends that the company will continue to operate the airport, and requires it to do so as a commercial undertaking. The valuation should not be based on an assumed abuse of its monopoly position, but the company must be expected to fix its charges at a level which will enable it to recover its proper costs, and will enable it, if efficient, to obtain a reasonable return on its capital.

7.86. The Commission's preliminary view is that the asset valuation methodologies used by the airports are not necessarily appropriate, and it has some concerns with the airports' application of the relevant methodologies and the valuations adopted. The Commission also has different views to the airports in respect of the extent of optimisation and what assets are included in the asset base.

7.87. The following comments are sought in connection with the views on asset base presented in this chapter:

- Should the costs of land include the costs associated with getting the land into airport use?
- Is it correct to value airfield land at opportunity cost?
- How the opportunity cost of airfield land should be determined?
- Is it correct to value specialised airfield assets at depreciated historic cost?
- Is the extent of (and reasons for the) optimisation undertaken by the Commission in determining asset base appropriate?
- Are the Commission's views on when new investment should be included in the asset base appropriate?
- Are the asset values determined for the airfield activities of AIAL, WIAL and CIAL appropriate?

8. WEIGHTED AVERAGE COST OF CAPITAL

INTRODUCTION

8.1. This chapter examines the second aspect relating to return on capital: weighted average cost of capital (WACC). WACC is relevant both for the purpose of determining prices and for the purpose of assessing performance. It is the element of the pricing models that allows for a required rate of return to be earned by debt and equity security providers. As well as being compensated for bearing the entity's capital costs, operating and maintenance expenditure, and taxes, capital providers are rewarded with a rate of return that reflects what they *could* be earning by committing their funds to an alternative project of similar risk—their opportunity cost of capital.[112] What is the cost of capital in respect of the airfield activities of each airport?

8.2. The Airport Authorities Amendment Act does not provide any guidance as to how airports should determine WACC.[113] However, guidance is provided by economic and financial theory.

8.3. In formulating its views expressed on WACC in this draft report, the Commission has obtained independent advice from Dr Martin Lally. A copy of his initial report to the Commission is included in appendix 12 to this report.

WACC METHODOLOGY

8.4. Companies are typically funded by a combination of debt and equity. WACC is the weighted average cost of each new dollar of capital raised at the margin. In the simplest terms, it is the cost of debt and the cost of equity weighted by the proportion of debt and equity. It is expressed by the following formula:

$$WACC = W_d R_d(1-t_c) + W_e R_e$$

where: W_d = proportion (weight) of debt funding
R_d = cost of debt
t_c = effective corporate tax rate
W_e = proportion (weight) of equity funding
R_e = cost of equity

8.5. Determination of the elements of WACC is subjective. Careful and detailed examination is required to ensure that figures used (and assumptions adopted) are reasonable.

---

[112] Australian Competition and Consumer Commission, *SACL Aeronautical Pricing Proposal*, Final Decision, 2001, p 170.

[113] The Secretary for Transport may issue guidelines for the completion of disclosure financial statements with respect to the use of methodologies for valuation of assets. At present the Secretary has issued no such guidelines. The airport companies are free to select their own methodology as long as they disclose details of the methodology used.

Cost of Debt

8.6. The relevant cost of debt is the current interest rate required by investors. It is based on the return that investors require. It can in some instances be observed directly as the yield on debt issued by a company, but is typically determined by way of a margin over and above the risk free rate, which is assumed to reflect what a firm of similar credit risk with an efficient capital structure could be expected to obtain financing for. This can be expressed by the following formula:

$$R_d = R_f + \text{Debt Premium}$$

where: R_f = risk-free rate
debt premium = β_d(MRP) + Expected Default Losses + Liquidity Premium
β_d = debt beta
market risk premium (MRP) = $R_m - R_f$
R_m = expected rate of return on the market portfolio

8.7. The debt premium determines the premium over and above the risk free rate that is required by investors for holding the debt. It reflects marketability and exposure to the possibility of default.

8.8. In determining the debt premium, the Commission potentially needs to consider such factors as the extent to which the airports use short-term debt and long-term debt, how they finance their assets (debt or equity), the actual premiums that the companies pay above the risk-free rate, the liquidity and cashflow situation, and their credit ratings.

8.9. Table 28 compares the debt premium estimates adopted by the airports and favoured by the airlines:

Table 28
Debt Premium

	Auckland	Wellington	Christchurch	Airlines
Debt Premium	1%	1.5%	0.5%	0.8%

8.10. All the airports have good credit ratings and generate strong cashflows. This suggests that they should have low debt premiums. The airports finance to varying degrees with debt and equity, and use a mix of short and long-term debt facilities—WIAL uses the most debt financing. In their 2000 financial years, the airports have paid interest rates as follows: AIAL 7.5-10%, WIAL 4.76-6.31%, and CIAL 5.27-7.09%. Over the same period, the risk-free rate ranged from 5.37% to 7.25%, an average of 6.65%. The actual rates paid by the airports suggest very low debt premiums for WIAL and CIAL, but a higher premium for AIAL.

8.11. However, they key consideration in determining the debt margin is what a firm of similar credit risk with an efficient capital structure could be expected to obtain financing for. The actual rates paid by the airports are of less importance.

8.12. The Commission's preliminary view is that a debt premium of 1% above the risk-free rate is considered to be appropriate for all three airports.

Cost of Equity

8.13. The cost of equity is the expected rate of return just compensating for risk. While the cost of debt can often be observed directly as the yield on debt issued by the company, the cost of equity cannot and must be estimated. A number of methods are available to estimate the cost of equity. However, the Capital Asset Pricing Model (CAPM) is the most popular due to its intuitive appeal and relative ease of application.

8.14. The CAPM develops a relationship between the risk of an asset (measured by its beta) and the opportunity cost of investing in that asset.[114] The essential principle underlying the CAPM is that risk-averse investors will not hold risky assets unless they are adequately compensated for the risks that they bear and, therefore, the greater an asset's risk, the greater the expected return. The CAPM links the risk-free rate, the asset's risk, and the expected return on the market portfolio. Given the risk of an asset, it provides the "premium" that investors can expect in terms of expected rate of return (over and above the risk-free rate)—it determines risk adjusted expected return on equity.[115]

8.15. The standard CAPM model was developed by Sharpe and Lintner and is expressed by the following formula:[116]

$$R_e = R_f + \beta_e(MRP)$$

where: β_e = equity beta

Taxes

8.16. In developing the costs for the different capital components, issues regarding taxes arise.

8.17. The standard CAPM does not take taxation incurred by investors explicitly into account and, therefore, does not adjust for the effect of any imputation credits attaching to dividends. Building on the work of Brennan, Lally has developed a version of the CAPM that explicitly takes account of personal tax rates that differ across both investors and sources of income and which is applicable to the New

---

[114] Ramesh Rao, *Financial Management: Concepts and Applications*, Maxwell McMillan Publishing, Second Edition, 1992. p 327.

[115] Ibid, pp 330-331.

[116] Sharpe W F, *Capital Asset Prices: A Theory of Market Equilibrium Under Conditions of Risk*, , Journal of Finance, Vol 19, 1964. Lintner J, *The Valuation of Risky Assets and the Selection of Investments in Stock Portfolios and Capital Budgets*, Review of Economics and Statistics, Vol 47, 1965.

Zealand tax regime. However, the resulting cost of equity is still an expected rate of return before personal taxes.[117] This model has been adopted by the airports.

8.18. The Brennan-Lally model can be expressed as follows:

$$R_e = t_{div}Div + R_f(1-t_{int}) + \beta_e(PTMRP)$$

where: t_{div} = weighted average effective tax rate on dividends for all investors
Div = dividend yield of the company
t_{int} = weighted average effective tax rate on interest for all investors
post-tax market risk premium (PTMRP) = $R_m - R_f(1-t_{int}) - t_{divm}Div_m$
t_{divm} = weighted average of t_{div} of market portfolio
Div_m = dividend yield of market portfolio

8.19. Assuming fully imputed dividends (and that investors have the ability to fully utilise them), the average investor faces a 33% marginal tax rate on interest, and capital gains are not taxed. It follows that t_{div} is zero and t_{int} is 33%. These assumptions result in a simplified Brennan-Lally model expressed as follows:

$$R_e = + R_f(1-t_{int}) + \beta_e(PTMRP)$$

where: $PTMRP = R_m - R_f(1-t_{int})$

8.20. While there has recently been a change in the top marginal personal tax rate, the assumption that t_{int} is 33% is still valid. Some investors will be taxed on interest at 20%, some at 33% and some at 39%.

8.21. The Commission's preliminary view is that WACC should be computed using the tax-adjusted Brennan-Lally CAPM.

Risk-Free Rate

8.22. The risk-free rate is the interest rate that an investor would earn on a riskless investment. However, there is no such thing as the risk-free rate in reality. Governments are typically the only entities in the market for funds considered to have such a low level of risk. Therefore, rates for Government stock are usually used to approximate the risk-free rate.

8.23. Table 29 compares the risk-free rates adopted by the airports and favoured by the airlines:

Table 29
Risk-Free Rate

	Auckland	Wellington	Christchurch	Airlines
R_f	6.97%	7.3%	6.23%	6.5%

[117] Brennan M (1970), *Taxes, Market Valuation and Corporate Finance Policy*, National Tax Journal 23, pp 417-427. Lally M (1992), *The CAPM under Dividend Imputation*, Pacific Accounting Review, Vol 4, pp 31-44.

8.24. The risk-free rate is used in calculating both the cost of debt and the cost of equity. The choice of risk-free rate significantly impacts on the resulting WACC and should be determined carefully.

8.25. A question that has to be resolved in determining the appropriate risk-free rate relates to the term (maturity) of the rate used. Alternatives are to use the maturity corresponding to the period for which prices are set, or the life of airfield assets. The Commission's preliminary view is that the risk-free rate should match the revision frequency of pricing. Prices are set by the airports for upwards of 5 year periods due to the requirement to consult with substantial customers every 5 years on charges. However, both AIAL and CIAL have recently set prices for a period of three years.

8.26. Having determined the appropriate maturity date to use, debate revolves around how the rate is set. Options include using the range over the relevant period, the midpoint, the endpoint, an average of the beginning and ending rates for the period, or the average over the period. The selection of the rate is important, as risk-free rates vary daily.

8.27. The Commission notes that the ACCC supports the use of short-term averaging of yields in order to smooth out the effects of financial markets volatility. In its recent decision regarding Sydney Airports Corporation Limited (SACL), the ACCC decided to use the 40 day moving average of 5 year rate.[118]

8.28. There is nothing significant about the date on which an airport makes a decision on new prices (or on which the new prices take effect) which suggests that the rate at this point in time should not be used—the date is arbitrarily chosen by an airport. The Commission's preliminary approach is to use an average on Government stock over the period in which an airport consults with its substantial customers (ending with the point at which any new prices come into effect) and with a maturity matching the point at which prices will again be reviewed (at maximum five years).

8.29. In analysing the efficiency implications of the recent price increases for the airfield activities of AIAL, the Commission has used a risk-free rate of 6.92%. This represents the average yields on three year Government stock over the six month period prior to the point at which AIAL's new prices came into effect (1 September 2000)—the period March to September 2000. To be consistent, the same rate of 6.92% is used for the purposes of analysing CIAL's current prices. For WIAL, the rate should be the average yield on five year Government stock in the six months preceding 1 July 1997, when the current price formula was settled for the next five years. This figure is 7.47%.

8.30. For assessing historical performance on an annual basis (and on average over time), the Commission's preliminary approach is to adopt the range of the risk-free rate for the appropriate financial period.

---

[118] Australian Competition and Consumer Commission, *SACL Aeronautical Pricing Proposal*, Final Decision, 2001.

Market Risk Premium

8.31. Market Risk Premium (MRP) represents the additional premium that investors require to hold the market portfolio—a diversified basket of 'risky' assets—over and above the return that can be obtained from investing in risk-free assets. Continuing debate exists about the appropriate size of the MRP.

8.32. MRP can be estimated on the basis of ex-post (historical) returns or ex-ante (forward-looking) returns. It is important to ensure that current estimates of investors expectations are incorporated. Recognising this, long-term historical measurements of MRP are typically used as a proxy for ex-ante expectations. However, historical returns should be used with caution as they may not be stable.

8.33. Treasury's handbook on cost of capital recommends the use of a 9% post-tax market risk premium in the tax-adjusted version of the CAPM (denoted PTMRP), equating to 6.4% in the standard version of the CAPM.[119] In its recent SACL decision, the ACCC adopted a similar pre-tax MRP of 6%. In reaching its decision, the ACCC commented that empirical evidence suggests a declining MRP.[120]

8.34. Consistent with the version of the CAPM used, the airports have adopted a 9% PTMRP based on the Treasury handbook. However, the airlines consider that while a PTMRP of 9% was appropriate in the 1980s, more recent studies have indicated much lower figures should be used. The airlines position of a 8% premium is apparently based on the work by Credit Suisse First Boston and PricewaterhouseCoopers, and guidelines of the Crown Company Monitoring Advisory Unit (CCMAU).

8.35. Table 30 compares the PTMRP adopted by the airports and favoured by the airlines:

Table 30
Post-Tax Market Risk Premium

	Auckland	Wellington	Christchurch	Airlines
PTMRP	9%	9%	9%	8%

8.36. The recent work by PricewaterhouseCoopers referred to by the airlines arrives at an estimate of 8 to 9% for PTMRP (5 to 6% MRP in the standard CAPM), but suggests that there is evidence to support the use of an estimate of 8%.[121] The 8% figure is arrived at using data from 1925, while the 9% is based on data from 1956. There is no strongevidence to suggest that the PTMRP is outside the range of 8 to 9%. The choice of 8% or 9% comes down to a trade-off between determining the PTMRP based on more data (and improving the statistical significance of the results) and including potentially less relevant data in the calculation.

---

[119] Treasury, *Estimating the Cost of Capital for Crown Entities and State-Owned Enterprises*, October 1997, p 10.

[120] Australian Competition and Consumer Commission, *SACL Aeronautical Pricing Proposal*, Final Decision, 2001, p 194.

[121] PricewaterhouseCoopers, *New Zealand Equity Market Risk Premium*, March 2000, p 6.

8.37. An number of approaches can be used to estimate PTMRP. The common approach is to observe ex-post risk-free rates and market returns and calculate an arithmetic average over a number of years. Other methods involve estimating the relationship between MRP and market volatility changes over time (variance or standard deviation); estimating the MRP consistent with the current value of shares and expected growth in market dividends; and considering estimates of the MRP for foreign markets.

8.38. The Commission's preliminary view is to adopt a PTMRP of 8%. The various approaches to estimating market risk premium all suggest a figure of 8% rather than 9%.

Beta

8.39. Risk relates to the possibility that expected returns may not actually materialise. The total risk of an asset or business is made up of both diversifiable risk and undiversifiable risk.

- Diversifiable (or unsystematic) risk is unique to the asset or firm and can be eliminated by diversification. The risk of obsolescence of its technology, the risk of reduced revenues caused by increasing competition, and the risks associated with patent approval, antitrust legislation, labour contracts, management styles, geographic location are all examples of unique risks.

- Undiversifiable (or systematic) risk is market risk, which is not unique to the firm. Such risk cannot be eliminated by diversification. It is related to, and dependent on, the state of the economy as a whole. The more systematic risk that is inherent in the operations of a company, the higher will be the cost of any debt and equity used to fund its operations.

8.40. A common misconception is that all variability and uncertainty in the returns accruing to an asset are included in the computation of WACC. Only the undiversifiable risk is relevant in determining the cost of equity. Investors are not compensated through CAPM for diversifiable risk. The CAPM implies that investors hold a diversified portfolio and diversify away this risk.

8.41. Beta measures the sensitivity of an asset to the market—its systematic risk.[122] It is probably the most contentious of the WACC components. It also significantly affects the resulting WACC.

Asset Beta

8.42. The asset beta (β_a) measures the sensitivity of a company's return to market returns when the company has no debt. It is a relative concept and specifically measures the

[122] Non-systematic risk should have no effect on beta, it may affect the expected cashflows and should, therefore, be dealt with there. For example, the expected cashflows may incorporate no allowance for the possibility of an adverse event, such as an earthquake. If this has a probability of 1% and will lower cashflows by $100 million in the event of it occurring, the expected cashflows should be reduced by $1 million.

sensitivity of returns to changes in the returns of the market. The higher the beta, the more volatile and risky the asset.

8.43. Airport revenues are affected by changes in passenger and aircraft movements. To the extent that these changes are correlated with Gross Domestic Product (GDP), they are likely to give rise to airport revenue that is highly correlated with GDP variation, and hence, systematic risk. The greater the extent of this systematic risk, the greater the asset beta.

Equity Beta

8.44. Equity betas reflect both operating and financial risk, while asset betas reflect only operating risk.[123]

- Operating (or business) risk is solely related to the risks associated with the firm's operations and the industry or sector in which it operates.

- Financial risk is the incremental risk (difference between the equity and asset betas) that arises when a firm takes on debt. Leveraged firms are more risky than firms without debt, as interest is a fixed cost that must be paid before shareholders receive anything—making the equity of such a firm more risky.

8.45. If a company has no debt—is entirely financed by equity—its asset and equity beta are identical. By adding debt to a company's capital structure, the shareholding becomes more risky, such that its equity beta is greater than its asset beta. The level of systematic risk associated with equity (the equity beta) is magnified according to the proportion of debt in the funding mix. The greater the proportion of debt, the greater the systematic risk associated with the residual cashflows available for distribution to shareholders, and the greater difference between its asset and equity beta. For otherwise identical investments, a company with more debt in its capital structure will have a higher equity beta and a higher required rate of return on equity than on a company with less debt.

Debt Beta

8.46. Although a debt beta does not typically enter into the calculation of WACC, it may be used to convert an asset beta to an equity beta. The relationship between the asset beta, the equity beta, and the debt beta can be expressed in the following formula:

$$\beta_e = \beta_a(1 + (W_d/W_e)) - \beta_d(W_d/W_e)$$

8.47. Often the debt beta is assumed to be zero for simplicity. Assuming that β_d equals zero leads to a higher β_a for any given β_e.

---

[123] *Weighted Average Cost of Capital for Christchurch International Airport*, Crighton Seed and Associates, June 1999, p 8.

Pure Play Comparisons

8.48. Beta may or may not be able to be estimated directly. Betas can only be directly estimated for listed companies. Where a beta cannot be estimated directly, a proxy or surrogate beta can be estimated by making adjustments for differences in gearing to the betas of similar entities or assets that are "pure play"—comparable companies with similar activities and risks. While such an approach is useful, it is often difficult to find a "pure play" comparison. It is acknowledged that estimation of betas invariably involves an element of judgement—need to ascertain what is "most appropriate". Even if a beta can be estimated directly, one should still seek comparators because the statistical reliability of beta estimates for single companies are poor due to the high standard errors.[124]

8.49. Characteristics important in assessing the suitability of comparators include the nature of the firm's output, the nature of the customer, the duration of any contracts with customers and suppliers, the extent of any regulation, the degree of monopoly power (i.e. price elasticity of demand), the nature of any real (such as the option to expand operations), operating leverage, market weight, and capital structure.

8.50. Table 31 provides some comparative airport asset betas:

Table 31
Comparable Airport Betas

Entity	Source/Date	Asset Beta
Adelaide	ACCC October 1999	0.61
BAA	London Business School	0.88
Brisbane	ACCC April 2000	0.70
Canberra	ACCC June 2000	0.65
Copenhagen	Bloomberg/Ernst & Young July 2000	0.32
Melbourne	ACCC October 2000	0.70
Perth	ACCC April 2000	0.70
Sydney	ACCC February 2001	0.60
Vienna	Bloomberg/Ernst & Young July 2000	0.77

8.51. Table 32 provides some comparative betas of other industries:

Table 32
Comparable Betas of Other Industries and Entities

Industry/Entity	Source/Date	Asset Beta
Ports (Auckland/Tauranga)	J B Were 2000	0.70
Contact Energy	J B Were 2000	0.69
NGC	J B Were 2000	0.54
Transpower	Airlines	0.30
Airways Corporation	Airlines	0.31
Telecom	J B Were 2000	0.88

8.52. The airports have determined their asset betas by using other airports as 'pure play' comparisons. AIAL's beta is based on the average of betas for a selection of listed

[124] Beta estimates in NZ are complicated by the relative thinness of the New Zealand Stock Exchange.

airports. CIAL justifies its asset beta on the basis that it is "within the range of asset betas used by the ACCC for airport regulation".

8.53. The airports consider that other utilities are not appropriate 'pure play' comparators as they exhibit less risk than airports (example cited are Airways Corporation and Transpower—both Government owned). Sydney Airports Corporation Limited (SACL) argues that the risk profile of an airport is significantly greater than for an energy network business and, therefore, the appropriate asset beta could be higher for airports generally. This is based on the following reasons:[125]

- Airports are likely to be more susceptible to downturns in economic circumstances than other utilities (such as electricity networks), particularly in respect of leisure travel.

- Airport earnings are becoming increasingly volatile as airlines increase flexibility through alliance arrangements, fleet evolutions and the relaxation of international air services agreements.

8.54. In the opinion of the airlines, Airways Corporation is the best comparison. The airlines consider airports to be "low revenue risk" for the following reasons:

- Airports have the power to set prices and insulate themselves from systematic (i.e.non-diversifiable) risk in this way.

- The geographic position of an airport leaves it subject to minimal competition from other New Zealand airports.

- The regulatory environment is light-handed and allows airports to match prices with anticipated volume changes and to adjust quickly for unexpected changes.

- Once consultation is completed to the satisfaction of the fairly minimal legal requirements, prices can be immediately changed.

8.55. The airlines consider that there are considerable differences between Australia and New Zealand airports such that the ACCC's betas are not necessarily applicable in New Zealand, and that, all other things being equal, lower asset betas are appropriate in New Zealand. They argue that New Zealand airports have lower systematic risks than Australian airports due to the following differences (the same reasoning applies to other overeas regulated airports):[126]

- The regulatory arrangements. New Zealand airports have an explicit legal right to set prices (in contrast to Australian airports) and can establish pricing arrangements that—to a significant extent—insulate them from systematic risk, either mechanistically, or by deciding to amend their prices at some future date.

---

[125] *Sydney Airport Revised Draft Aeronautical Pricing Proposal*, 2000, p 92.

[126] Lovick S, *Commentary on the WACC assumptions adopted by CIAL*, Network Economics Consulting Group, October 2000, pp 3-4.

- Revenue stability and variation. The current pricing arrangements do not translate systematic demand risk into systematic revenue risk as the prices are being set for a short period by international standards.

8.56. Table 33 compares the asset betas adopted by the airports and favoured by the airlines:

Table 33
Asset Beta

	Auckland	Wellington	Christchurch	Airlines
β_a	0.4 to 0.5	0.45 to 0.6	0.65	0.3 to 0.35

8.57. Both the airports and airlines support their views on beta by reference to estimated betas of what they consider are "comparable" companies. There is considerable latitude when using comparable firm data to assess the appropriate asset beta for airports. The question as to which firms are most comparable and should receive the most weight in the assessment is open to debate. The Commissions does not consider that the comparators offered by the airports and the airlines are particularly useful. Averages of airport betas are statistically unreliable due to the small number of entities averaged. Furthermore, the comparators' betas have not been adjusted (or have been incorrectly adjusted) for non-aeronautical activities, market leverage differences, or differences in regulation. Some of the other industries suggested as comparators are also markedly different in respect of their monopoly powers and regulatory regimes.

8.58. In the case at hand, the regulatory environment is fundamental to the performance of the airports and is, therefore, the dominant factor considered in choosing comparators. Useful benchmarks for an asset beta are as follows:

- United States firms engaged in electricity generation and/or distribution which are subject to rate of return regulation (that almost guarantees them a certain rate of return).

- Electricity firms in the United Kingdom subject to CPI-X price caps.

8.59. In respect of regulation, AIAL and CIAL clearly face more systematic risk than US rate of return regulated firms, but less than UK price-capped firms. Adverse demand shocks between price reviews will affect revenues until prices are reset (unless there is provision for prices to be adjusted between reviews), but the airports could potentially recoup the effects of past demand shocks when they reset prices.

8.60. AIAL acknowledges that its beta would be low if it were able to adjust prices in circumstances (such as an economic downturn or rise in interest rates) that impact on passenger numbers and number of aircraft landings. However, its new landing charges remain fixed unless unexpected changes in circumstances occur which materially affect its costs and revenues (although AIAL has already signalled that landing charges will increase by 5% in each of the next two years). The intention is apparently only to reset charges to recover any unexpected costs or loss in revenues associated with specific (or diversifiable) risks such as costs imposed by stricter noise

controls or increased costs from customs and security clearance. This has apparently been factored into AIAL's beta estimate.

8.61. Taking growth projections into account, CIAL has also set charges at a fixed level for the next three years. In respect of total revenue from airfield activities, CIAL assumes the risk (stands to benefit) if aircraft movements prove to be optimistic (conservative). However, CIAL has signalled that, should the fleet mix or the relative number of each type of aircraft change, then it will look to change the allocation of total revenue and, therefore, land charges. This minimises CIAL's risk.

8.62. In reality, the airports cannot reset prices instantaneously and recover immediately any shortfall due to changes in costs or throughput. The time taken over consultation demonstrates the constraints faced. As prices have been set for three years with little or no review in between, airports bear most of the risks associated with fluctuations over that period in passenger numbers, operating costs, aircraft movements, and aircraft fleet mix. Having said this, landing charges are determined based on reasonably reliable forecasts of movements, and in some instances, provisions are made for charges to be adjusted where these estimates prove materially inaccurate.

8.63. The average asset betas of regulated US and UK electricity firms are 0.36 and 0.56, respectively (adjusting for New Zealand market leverage). Given that the risk of the airfield activities of AIAL and CIAL is considered to fall between the bounds of regulated US and UK entities, this implies an asset beta of around 0.45 (the mid-point) within a range of 0.4 to 0.5.

8.64. The Commission notes that CIAL's beta may in fact be higher than AIAL's, but it has been unable to accuracy estimate to what extent. CIAL's beta may be higher as its high proportion of domestic traffic (relative to Auckland) means that it is likely to experience greater shocks to changes in the domestic economy (given that a domestic CAPM is used).

8.65. The Commission also notes that AIAL's and CIAL's betas may be higher than that for the electricity comparators used, as airports are likely to experience greater demand shocks. However, no adjustment has been made for this due to difficulties in estimating accurately how much to adjust beta by.

8.66. In the case of WIAL, its deed with airline customers allows for charges to be adjusted annually if the actual movements and/or operating costs from the previous year differ from forecasts; or if inflation exceeds certain levels. The provisions of its current deed suggests that WIAL's risk is closer to that of US rate of return regulated electricity firms than UK price-capped entities. This implies a beta within a range of 0.3 to 0.35.

8.67. Based on the preceding discussion, the Commission's preliminary view is that AIAL's estimate of asset beta is reasonable. The estimates adopted by WIAL and CIAL are considered too high. A range of 0.4 to 0.5 is considered appropriate for CIAL. For WIAL, a range of 0.3 to 0.35 is considered appropriate.

8.68. The lower asset beta for WIAL reflects provisions in its deed on airport charges with its airline customers that permit it to vary prices over the term of the deed in response to demand and cost shocks.

Weights

8.69. A number of options exist with respect to selection of the weights used to determine WACC. They include:[127]

- Proportions present in the company's financial structure.
- Target or long-run proportions of the company.
- Proportions present in the financial structure of comparator private sector companies (used to estimate β_e).

8.70. All these ratios involve market values rather than book values.

8.71. It is considered inappropriate to use the actual weights from the statement of financial position of the company (book value weights). Table 34 summarises the book value debt and equity ratios:

Table 34
Debt Equity Ratios of AIAL, WIAL and CIAL 1998-2000

	Auckland	Wellington[128]	Christchurch
	Debt:Equity Ratio	**Debt:Equity Ratio**	**Debt:Equity Ratio**
1998	59.43 : 40.57	42.50 : 57.50	41.25 : 58.75
1999	38.08 : 61.92	49.67 : 50.33	33.04 : 66.94
2000	40.58 : 59.42	73.91 : 26.09	43.09 : 56.91

8.72. Current ratios are useful only if they reflect the manner in which the company will finance its investments in the long-term. An alternative is target weights, which are suggested to avoid the bias which may occur from one accounting period to the next as actual debt and equity levels change over time.[129] However, the Commission considers that actual leverage ratio based on the market values of debt and equity is most appropriate (given the debt premium used).

8.73. Table 35 compares the weights used by the airports (with which the airlines have not disagreed):

---

[127] Treasury, *Estimating the Cost of Capital for Crown Entities and State-Owned Enterprises*, October 1997, p 33.

[128] Note that in 2000 WIAL significantly restructured the way it finances with 84% of shares being repurchased and replaced by unsubordinated debt (from the shareholders). "Equity" now finances only 36% of assets.

[129] *Weighted Average Cost of Capital for Christchurch International Airport*, Crighton Seed and Associates, June 1999, p ii.

Table 35
Weights of Debt and Equity

	Auckland	Wellington	Christchurch
W_d	40%	50%	40%
W_e	60%	50%	60%

8.74. The appropriate market value weights of debt and equity can easily be computed for AIAL. Taking the book value of debt as at mid-2000 as a proxy for market value, and multiplying the number of issued shares at that time by the current share price at that time, results in a debt equity ratio of 25:75 for AIAL.

8.75. The Commission's preliminary view is that a 25:75 ratio is appropriate for AIAL. For the purposes of its analysis, the Commission has also used a 25:75 ratio for WIAL and CIAL.

Nominal v Real WACC

8.76. WACC can be expressed in real or nominal terms. The relationship between the real and nominal WACC—between any real and nominal rate—is defined by the Fisher equation:

$$(1 + R_{nom}) = (1 + R_{real})(1 + i)$$

where: R_{nom} = nominal rate
R_{real} = real rate
i = rate of inflation

8.77. A decision must be made over whether WACC should be computed in nominal or real terms. The choice of real or nominal doesn't matter *provided* there is consistency in the application—in particular in the parameter estimates and cashflow estimates. Consistency is particularly important where WACC is used in pricing, valuing assets and comparing actual rates of return. Three options are available:[130]

- Apply a nominal rate to the depreciated historic cost of assets,
- Apply a nominal rate to revalued assets and include any revaluation amounts as income.
- Apply a real rate to revalued assets, but don't include any revaluation amounts as income.

[130] *Treasury, Estimating the Cost of Capital for Crown Entities and State-Owned Enterprises*, October 1997, p 18.

8.78. For the purposes of this draft report, the Commission's has chosen to use a nominal WACC in order to be consistent with its approach to asset base and analysis of historical returns.

WACC ESTIMATES

Estimates Adopted by the Airports

8.79. All three subject airports have utilised the Brennan-Lally model in their computations of WACC. However, there are some variations in the assumptions adopted.

8.80. Last year, pursuant to the Airport Authorities (Airport Companies Information Disclosure) Regulations 1999, the airports disclosed estimates of the WACC for their identified airport activities. The estimates are as follows:

Table 36
WACC Estimates Disclosed by AIAL, WIAL and CIAL 2000

	Auckland	Wellington	Christchurch
R_f	4 year rate - 6.97%	7.3%	5 year rate - 6.23%
t_c	33%	33%	33%
t_{int}	= t_c =33%	= t_c =33%	= t_c =33%
t_{div}	0%	0%	0%
t_{divm}	0%	0%	0%
Div	N/a	N/a	N/a
Div_m	N/a	N/a	N/a
PTMRP	9%	9%	9%
Debt Premium	1%	1.5%	0.5%
β_d	0%	0%	0%
R_d	7.970%	8.8%	6.73%
W_d	40%	50%	40%
W_e	60%	50%	60%
β_a	0.4 to 0.5	0.45 to 0.6	0.65
β_e	0.67 to 0.83	0.9 to 1.2	1.0833
R_e	10.67 to 12.17%	12.991 to 15.691%	13.924%
Nominal Tax-Adjusted WACC	8.5 to 9.4%	9.5 to 11.5%	10.15%[131]

Differing Views of Substantial Customers

8.81. The airlines have commented that the method of calculating the appropriate WACC is largely not an issue. However, the airlines disagree with the airports' estimates of WACC with respect to four components: the risk-free rate, the post-tax market risk premium, the debt premium, and the asset beta. The following figures are preferred:

Table 37

[131] CIAL's final consultation decision in December 2000 also adopts a WACC of 10.1%, but arrives at this figure based on slightly different components: R_f 6.7%, Debt Premium 1.0%, and t_{int} 36%.

Differing Views of Airlines on WACC Components

R_f	6.5%
PTMRP	8%
Debt Premium	0.8%
β_a	0.3 to 0.35

8.82. Based on these alternative figures, the airlines consider that the appropriate WACC for AIAL is 7.2-7.5% and for CIAL 7.09-7.59%.

Appropriate WACC

8.83. Each airport may have its own unique characteristics which can result in a distinct risk profile and WACC. The question is what WACC is appropriate. The Commission considers that the appropriate WACC for the airfield activities of each of the airports are as follows (the differences to the airports' views are shaded):

Table 38
Appropriate WACC

	Auckland	Wellington	Christchurch
R_f	6.92%	7.47%	6.92%
t_c	33%	33%	33%
t_{int}	33%	33%	33%
t_{div}	0%	0%	0%
t_{divm}	0%	0%	0%
Div	N/a	N/a	N/a
Div_m	N/a	N/a	N/a
PTMRP	8%	8%	8%
Debt Premium	1%	1%	1%
β_d	0%	0%	0%
R_d	7.92%	8.47%	7.92%
W_d	25%	25%	25%
W_e	75%	75%	75%
β_a	0.4 to 0.5	0.3 to 0.35	0.4 to 0.5
β_e	0.53 to 0.67	0.40 to 0.47	0.53 to 0.67
R_e	8.90 to 9.97%	8.20 to 8.74%	8.90 to 9.97%
Nominal Tax-Adjusted WACC	8.0 to 8.80%	7.57 to 7.97%	8.0 to 8.80%

CONCLUSIONS

8.84. The Commission's preliminary view is that the WACC estimate adopted by the airports are unreasonable insofar as the adopted estimates of certain components are inappropriate. Taking the mid-points of the above ranges, the appropriate WACC for the airfield activities of AIAL and CIAL is 8.4%, and for WIAL 7.77%. The estimates adopted by the airports exceed these figures.

8.85. The following comments are sought in connection with the views on WACC presented in this chapter:

- Should CIAL's asset beta be greater than AIAL's, given the different exposure to domestic demand?
- Is the appropriate debt premium adopted by Commission?
- Is the appropriate risk-free rate adopted by the Commission?
- Is the appropriate asset beta adopted by the Commission?
- Are the comparators for the airfield activities supplied by AIAL, WIAL and CIAL used by the Commission in order to estimate asset beta appropriate?
- Is the market risk premium adopted by the Commission appropriate?
- Is the leverage ratio adopted by the Commission appropriate?
- Are the WACC estimates developed by the Commission appropriate?

9. AIRFIELD CHARGES

INTRODUCTION

9.1. There appear to be three issues with the pricing of airfield activities that need to be examined in the current inquiry:

- Are prices generally too high, so as to yield excessive profits (or allow excessive costs)?
- Is the structure of prices the allocatively efficient one?
- Does the structure of prices lead to cross-subsidisation?

9.2. The first of these issues is considered in chapter 10; the other two are discussed here. Airports use cost-allocation-based methods to derive prices. They work out their total costs, and then allocate the corresponding revenue requirements across their customers. The focus in this chapter is to assess to what extent the resulting structure of prices for airfield activities are allocatively efficient, and whether there is cross-subsidisation.

AIRPORT PRICING ISSUES

9.3. As discussed earlier in chapter 6, pricing from an economics perspective serves the purpose of allocating scarce resources between alternative uses. In general terms, the price for each good or service should be set where the marginal cost of supply equals demand, so that the ensuing quantity produced maximises economic welfare (or allocative efficiency). In the airfield activities context, setting prices in this way potentially encounters a number of difficulties:

- Efficiency requires that separate products are priced separately according to the marginal cost of supply. However, the administrative cost of having separate charges has to be taken into account, especially when the cost of each service is small. It might be commercially impractical to measure each user's marginal cost and to charge accordingly. Consequently, an approach commonly adopted by airports is to set prices for a limited number of groups of users (although this may not necessarily generate efficient prices).
- A characteristic of the cost structure of an airport's airfield activities is the high proportion of fixed costs. As a consequence, average cost is likely to be greater than marginal cost. As a result, setting efficient prices at marginal cost would produce financial deficits. If the airfield activity is required to cover its costs, "first best " pricing would not be financially viable.
- Airports, because they offer a variety of services to a variety of users, have the potential through their charges to engage in cross-subsidisation. Cross-subsidisation can arise where individual users do not pay enough to cover the additional costs they impose on the provider, or where a service as a whole does not recoup its costs from users. Cross-subsidisation is economically inefficient

because some users contribute towards the cost of the services enjoyed by others, implying that prices diverge from marginal cost.

- As an airport's runway has a limited capacity, allowance may have to be made in the pricing structure for periods when the runway is congested (demand exceeds full capacity). In addition, airfield activities may impose costs (i.e., noise pollution) on third parties. These externalities could be built into the pricing structure.

9.4. The focus in this chapter is on the issues raised by the first three bullet points above. It is assumed that runways are not capacity-constrained, and that externalities (if any) are handled by non-pricing mechanisms (e.g., night curfews). The first two points relate to the allocatively efficient level of prices, and are dealt with first; the third relates to cross-subsidisation, which is considered second.

ALLOCATIVELY EFFICIENT PRICES

9.5. As just noted, given that "first best" pricing of airfield activities would lead to financial deficits, a "second best" form of pricing has to be used. This would involve setting price above marginal cost, such that revenues just cover costs (including a normal return on capital employed), but in such a way as to minimise the loss of allocative efficiency across the various users.

9.6. Under Ramsey pricing (as defined in paragraph 6.13), the price for each user (or group of users) would be set by adding a percentage mark-up on marginal cost, with the size of the mark-up being inversely proportional to the price elasticity of demand of that user or group of users. The mark-ups are scaled up until revenues in aggregate cover costs. By this means, airfield costs would be allocated more heavily to those with the greatest willingness to pay; that is to say, those users least sensitive to price increases pay the highest mark-ups, and vice versa. As a result, the size of the departures of output volumes from marginal cost pricing are minimised (allocative inefficiency is minimised), subject to satisfying the financial break-even constraint.

9.7. However, the implementation of such a scheme would require knowledge of the price elasticities of demand, or failing that, of good proxies for them. Prices would also have to be adjusted where cross-elasticities were significant. It should be recognised, however, that cost functions and demand elasticities are only imperfectly known in the commercial world, and managers are fallible. The efficiency of prices have to be judged in that context, rather than against the theoretical ideals found in an economics textbook.

9.8. The setting by an airport of Ramsey-compliant airfield (essentially, landing) charges would probably start from the recognition that the bulk of the airfield costs are invariant with the number of aircraft movements, and hence are not able to be allocated between movements in any sense that would be helpful to decision-making.[132] The marginal (or additional) cost of an additional aircraft movement

---

[132] See, for example: W. J. Baumol, M. F. Koehn, and R. D. Willig (1987), *How Arbitrary is 'Arbitrary'? - or, Toward the Deserved Demise of Full Cost Allocation,* Public Utilities Fortnightly, vol. 120, September 3rd, 16-18; and I .N. Kessides and R. D. Willig, *Restructuring Regulation of the*

would amount to the additional wear-and-tear on the runway pavement and associated taxiway and apron, and that would be small. As the other costs are incurred regardless of whether that aircraft uses the runway or not, they have to be recouped through a Ramsey-based mark-ups.

9.9. As noted, the mark-up would depend upon the underlying demand elasticity of the user, which in turn would reflect the size of the aircraft making the movement and its purpose. For example, a given increase in runway charges would probably tend to have a much bigger impact on the demand from GA aircraft, at least in part because that charge would convert into a much higher levy per passenger, and hence reduced demand for seats. Hence it can be inferred that operators of larger aircraft will probably have a more inelastic demand for runway use, whereas for smaller aircraft the demand will less inelastic. Therefore, a rule of thumb to generate Ramsey prices is that the mark-up should be larger for larger aircraft, and smaller for smaller aircraft.

9.10. A practice frequently used by airports—including the subject airports, as indicated below—is to set runway charges in relation to the weight of aircraft, usually in exact proportion to each aircraft's maximum certified take-off weight (MCTOW)—albeit that weight bands are often used for administrative simplicity. A consequence of this approach is that it leads to charges being set in relation to what the market will bear, with larger aircraft bearing a larger than average amount of the fixed costs. In other words, it could be (as has been suggested elsewhere) that the MCTOW acts as a rough proxy for the inverse of the price elasticity of demand for runway use. This suggests that given the difficulty of estimating the demand elasticities directly, airport cost-based pricing approaches could generate prices that are sufficiently close proxies to the desired Ramsey prices.

9.11. However, Morrison suggested that a more efficient proxy for the underlying demand elasticities would also include the length of sector travelled.[133] This is because for a given type of aircraft, the elasticity of demand for a flight will be less sensitive to the landing charge for longer flights than for shorter ones. Morrison found that the incorporation of both sector length and MCTOW in the estimation of Ramsey prices substantially changes the prices compared to those based on MCTOW alone. For a given aircraft type, the MCTOW price increasingly falls below his price as sector length increases; and for a given sector length, the MCTOW price rises above his price with increasing aircraft size. Consequently, an alternative superior proxy measure for demand elasticity suggested by Morrison could be "available seat kilometres" because it incorporates both aircraft size and sector length.

9.12. There may also be demand complementarities between airports. For example, a domestic flight must involve two airports, so that the demand by aircraft operators for the use of one will be influenced not only by the charge it levies, but also by the charge levied by the other. This may have to be factored into Ramsey-compliant charges.

Rail Industry for the Public Interest, in: Railways: Structure, Regulation and Competition Policy, DAFFE/CLP(98)1, Paris: Committee on Competition Law and Policy, OECD, 1998, pp 151-52, 154-55.

[133] Morrison S.A., *The Structure of Landing Fees at Uncongested Airports*, Journal of Transport Economics and Policy, Vol 6, 1982, pp 151-59.

COST ALLOCATION

9.13. As noted above, airports typically determine charges on the basis of allocated costs, rather than according to Ramsey principles. This probably reflects the difficulties inherent in calculating Ramsey prices in practice, and the fact that it is easier to justify the charging structure to users if it can be related to costs. Moreover, cost-based pricing is supported by ICAO.

9.14. ICAO has stated that as a general principle it is desirable that users ultimately bear their "full and fair" share of the cost of providing the airport. With regard to the apportionment of costs, the following principles are suggested (among other things):[134]

- The proportion of costs allocated to various categories of users should be determined on an equitable basis.
- The users' ability to pay should not be taken into account until all costs are fully assessed and distributed on an objective basis.
- Landing charges should be based on the weight formula, using MCTOW as the basis for assessment.

9.15. The issue for the present inquiry, because of its focus on the efficiency of prices, is whether the use of cost-based pricing mechanisms by the subject airports results in pricing structures for airfield activities that offer a practical approximation to Ramsey prices. This requires an assessment of those pricing mechanisms, which is undertaken next. The steps involved in cost-based pricing of airfield activities are as follows: identifying the costs to be allocated; selecting the broad allocation approach; and determining the detailed allocation of individual cost components.

Identification of Costs

9.16. The costs of airfield activities can be broken down into four categories: the return on the capital cost of land; the return on the capital cost of structures (runways, taxiways and aprons); maintenance costs on structures; and the rescue fire service. The first two cost categories, and to some extent the fourth, are fixed in nature. Hence the great bulk of the costs are fixed. Fixed costs are costs that do not change as a result of short-run changes in output, as measured by the number of aircraft movements. However, these costs may change in the long-run as a result of future capital investments that add to the airfield structures or to the airport's land holdings.

9.17. Sunk costs are costs that, once incurred, cannot be recouped. All sunk cost are fixed costs, but not all fixed costs are necessarily sunk. In the case of airfield activities the fixed costs that are sunk are the returns on the capital cost of structures. Those assets are so specialised as to have no alternative use. While the return on the capital cost of the airfield land is fixed, that cost is not sunk as the land could be used for another purpose.

---

[134] *ICAO's Policies on Charges for Airports and Air Navigation Service*s, 2001; ICAO *Airport Economics Manual*, 1991. Note that New Zealand is a contracting state.

9.18. Airfield operating costs are variable costs, in that they change as output volumes change. The maintenance costs of a runway are related to the wear and tear of the sealed surfaces, which is in turn directly related to the number of aircraft movements and the weight of aircraft. The costs of an airports' rescue fire service varies (at specified increments) depending on the number of volume, mix and size of aircraft using the airport.

9.19. As noted above, the marginal cost of airfield activities are the additional costs imposed by another aircraft movement, which is very small. Marginal cost includes by definition only those cost components that are variable.

9.20. An economically significant feature of airports is that they produce multiple outputs. For example, typically they provide airfield services for aircraft and terminal facilities for passengers and freight. A feature of multi-product firms is that there may be costs that are "common" to two or more outputs. For a hypothetical firm producing products "A" and "B", the costs common to both are those that do not change with changes in the volumes of either product produced. They would still be incurred unless the firm ceased to produce both products.

9.21. The level of common costs is sensitive to the product definition used. Thus, if in the example just cited, "A" and "B" were actually different varieties of the same product, the common costs discerned would be redefined as fixed costs. In the airfields context, if "A" and "B" were defined as landing services to "large" and "small" aircraft respectively, and these were treated as separate outputs, then most of the costs of airfield activities would become common costs. However, nothing much is gained by this distinction, because if they were instead treated as one output, the same costs would still be incurred regardless of whether one or both outputs were supplied, and still could not be allocated between the outputs. In that case, common costs appear to be limited to elements of the airport's corporate administration and overheads.

9.22. Stand-alone costs are those incurred by an airport in only providing one service—for example, the landing services for general aviation aircraft or the provision of airfield activities. They are the minimum costs that an efficient airport would incur in providing the service. Stand-alone costs include fixed, sunk, variable and common costs. They equal total costs less avoidable costs (if any).

9.23. The incremental costs of airfield activities are the additional costs imposed by another group of users—for example, medium-sized aircraft operated by domestic airlines. They include fixed, sunk and variable costs. The difference between incremental and stand alone costs is associated with the common costs of providing activities together.

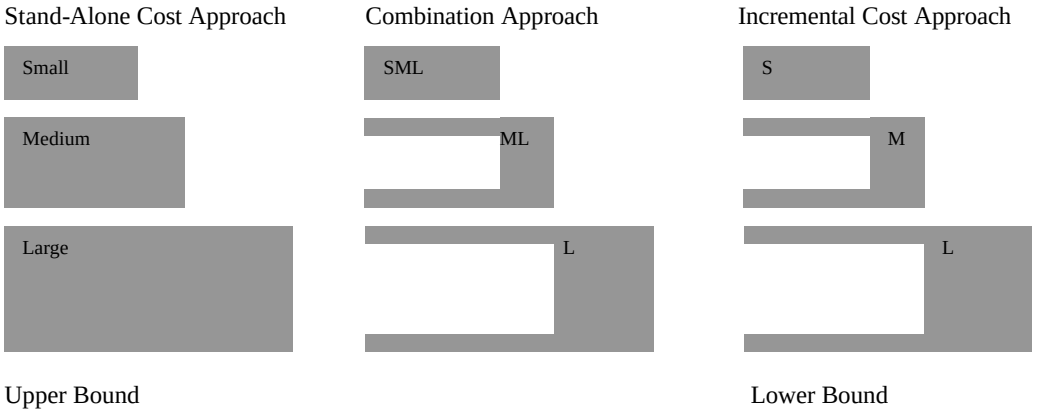
9.24. Avoidable costs are those costs which would be avoided (saved) if an activity were to cease. For example, if a group of users (such as medium-sized aircraft operated by domestic airlines) were to discontinue use of the airport, or if an airport were to discontinue to provide any services other than airfield activities. Sunk costs are ignored.

Approach to Cost Allocation

9.25. As discussed above, the cost structure of airfield activities is characterised by a high proportion of costs being fixed, and the marginal cost of an additional unit of output—an aircraft movement—being very low. The problem then for a cost-allocation approach to pricing is how to allocate the fixed costs between users.

9.26. Chart 2 depicts in a stylised way three alternative approaches to the cost allocation of airfield activities. The symbols "S", "M" and "L" denote the three aircraft size classes, "small", "medium" and "large", respectively. The shaded areas represent the areas of the runway used by, and hence the costs that are to be attributed to, each aircraft size class. Each approach adopts a different stance on which size class is considered to 'cause' which costs. The "stand-alone cost" approach gives an upper bound on the total of costs that are attributed, whereas the "incremental cost" approach gives the lower bound. The "combination" approach represents an intermediate position.

Chart 2
Alternative Approaches to Cost Allocation



9.27. The stand-alone cost approach uses the existing scale of operations as a starting point, and treats each of the three aircraft sizes as representing different outputs. It involves asking for each size class what costs would be avoided by not supplying it with runway services. In the case of the large aircraft, no costs would be avoided since large aircraft use the entire length and width of the runway, and so they are allocated the cost of the entire runway. This gives the stand-alone cost of a runway specifically designed to service only large aircraft. In respect of medium-sized aircraft, the costs avoided (and deducted from total cost to arrive at stand-alone cost) are the incremental costs of providing landing services to large aircraft. For small aircraft, the costs avoided would be the that of the increments of capacity required for medium-sized aircraft plus the further increment beyond that for large-sized aircraft.

9.28. The upshot is that the stand-alone cost approach, by recouping all of the annual runway costs from the large aircraft, and then allocating further costs to the medium and small aircraft, results in over-recovery unless the allocated costs are scaled back to equal the actual annual total cost of the facility. Without any scaling back, the resulting charges would neither be Ramsey-compliant—because of the over-recovery (regardless of the appropriateness of the relative charges borne by different sizes of

aircraft)—nor would they be truly "stand-alone", as the aggregate charge would exceed the minimum needed for an efficient entrant to replicate the supply of the same services to all aircraft classes. A further feature of this approach is that it may result in a proportionately higher charge for larger aircraft than in other approaches.

9.29. In contrast, the incremental cost approach begins by asking what are the costs of the minimum size of runway needed to met the needs of small aircraft. All of those costs are then allocated to the small aircraft category. Starting with that small runway, the additional costs associated with the wider and longer runway needed to meet the needs of medium aircraft are then calculated. Those incremental costs are then recovered in the charges for that aircraft size class. Finally, starting with the runway scaled for medium aircraft, the additional costs associated with the yet wider and longer runway needed to supply large aircraft are calculated, and those costs are recouped from the charges imposed on that aircraft size class. In other words, under the incremental cost approach, the costs allocated to medium and large aircraft include only the additional costs of supplying that increment. As a result, and in contrast to the stand-alone approach, the incremental cost approach allocates relatively little cost to large aircraft, and relatively more cost to small aircraft.

9.30. Under the so-called combined approach (proposed by Travers Morgan in 1988), the costs of the portion of the runway used by small aircraft are shared amongst all aircraft size classes, on the grounds that they all use it. The increment of runway needed by medium aircraft (but also used by large) is shared between both of those size classes. Finally, the further increment of runway needed by large aircraft is allocated only to that size class (as it is not used by the smaller classes).

9.31. This combined approach has tended to be the one used by the subject airports in determining their cost-based landing charges. The costs allocated to each aircraft size class are charged out in relation to each aircraft's MCTOW. Large, heavy aircraft pay more than small, light aircraft because they require longer, wider and more strongly engineered runway pavements, and take up more space on the aprons. It has also been suggested that charges calculated in this way may result in a quasi-Ramsey pricing structure, with those aircraft having the greater "willingness to pay" being charged more than those with less.

9.32. As part of its recent consultation, CIAL completely reviewed the structure of its pricing model and landing charges. However, the resulting new pricing model does not significantly differ from the model developed in 1991. AIAL, in contrast, did not review the structure of its prices as part of its recent consultation. Instead, AIAL chose to impose a uniform increase in all landing charges.

Allocation of Cost Components

9.33. The basis on which the different components of the cost of airfield activities are allocated between users varies by the subject airports is summarised in table 39. In general, the following apply:

- Airfield land is typically allocated to users based on the number of aircraft movements and the runway area required.

- The costs of sealed surfaces (runways, taxiways and aprons), and the damage to them, are shared among users based a variety of factors including the runway area used, runway thickness required, number of landings, seats landed[135], tonnes landed[136], and equivalent annual landings of design aircraft[137].

- The costs of rescue fire services are allocated to users based on rescue fire category required[138] and the number of landings or seats landed.

Table 39
Basis of Cost Allocation

	AIAL	WIAL	CIAL
Return on the capital cost of land	Landings and m^2 runway area used (width x length)	Landings and m^2 runway area used	Landings and m^2 runway area used except for 1984 runway extension which is based on seats landed (number of seats x number of landings)
Return on the capital cost of runways & taxiways	Landings and m^3 runway used (width x length x depth)	Equivalent landings and m^2 runway area used	Equivalent landings and m^2 runway area used except for 1984 runway extension which is based on seats landed
Return on the capital cost of aprons	Landings and m^3 runway used	Tonnes landed (MCTOW x number of landings)	Seats landed
Runway damage (operating costs of sealed surfaces)	Equivalent landings	Equivalent landings and m^2 runway area used	Equivalent landings and m^2 runway area used except for 1984 runway extension which is based on equivalent seats landed (number of seats x equivalent number of landings)
Rescue fire service costs	Seats landed	Landings	Landings

9.34. The cost of runway damage aims to take account of the wear-and-tear on the runway, and associated taxiway and aprons, caused by aircraft movements. The wear-and-tear has been thought to vary exponentially with aircraft weight, or more precisely, with the loading per wheel, and is considered to be greater on take-off when the plane has its full fuel load. However, the airlines have suggested that the relationship is actually linear. In any case, the cost per movement is likely to be very low.

9.35. The charging system described above attempts to identify the "causes" of costs, and to allocate the costs accordingly. However, this in itself is a somewhat meaningless exercise as most of the costs of airfield activities do not vary with the number of landings, but are fixed and, indeed, sunk. Hence, there is no economically rational way of allocating most of the costs. The focus has to be on recouping the costs in a way that does least damage to allocative efficiency. The cost allocation

[135] Seat capacity of aircraft multiplied by the number of landings.

[136] Maximum certified take-off weight of aircraft (MCTOW) multiplied by number of landings.

[137] Calculated in accordance with Federal Aviation Authority (FAA) Advisory Circular AC150/5320-6C. An algorithm that reflects the wheel weights and required runway length of aircraft.

[138] Defined for each aircraft per ICAO and New Zealand Civil Aviation Authority (CAA) requirements.

methodologies are only of relevance in terms of the extent to which they generate Ramsey-compliant pricing structures.

Price Discrimination Between Acquirers of Airfield Activities

9.36. The landing charge payable by a given aircraft landing at any of the three airports is calculated by multiplying a dollar charge per MCTOW by the MCTOW of the aircraft. The dollar charge per MCTOW varies across a number of weight bands, the charge for each band being an average of the 'actual' charges for a particular weight band that would apply if the model-based charges were to be strictly adhered to. Hence, aircraft are actually charged a price based an allocated average cost, which may be greater or lower than the actual cost attributed to the aircraft by the cost model. Weight bands and the associated averaging are used to ease the administration of the charging system. In contrast, until this year, CIAL had assessed its landing charges on an individual aircraft basis..

9.37. Clearly, the bands adopted (and the MCTOW of individual aircraft) can significantly affect the landing charges paid by different types of aircraft. The top weight break for AIAL is 40 tonnes, but for WIAL and CIAL it is 30 tonnes, so any aircraft between 30 and 40 tonnes (for example, the whisper jets used by the former Qantas New Zealand) fall into a lower weight band at AIAL than they do at CIAL or WIAL. Aircraft actually end up paying an average cost, which may be greater or lower than the actual cost that aircraft incurs (based on the models). The averaging and use of bands is done for ease of administration, but might result in price discrimination (although it is unlikely).

9.38. Although cross-subsidisation in airfield activities could arise between different classes of users, such as between large and small aircraft classes, this is unlikely to occur. As noted above, the additional cost of a further aircraft movement is very low, and the charge would have to be below that figure to give rise to cross-subsidisation. The airports clearly set their charges much above that figure. Hence, on this basis the Commission believes that cross-subsidisation within airfield activities is unlikely to be a problem.

9.39. However, there may be some cause for complaint on equity grounds in relation to the banding of charges. Likewise, the stepped system of charges could have an impact on efficiency, in that it may dampen any incentives on airlines to reduce landing charges by adopting lighter aircraft.

Conclusion

9.40. The Commission is of the view that the costs of airfield activities should be recovered as efficiently as possible by using pricing structures that adhere as closely as possible to Ramsey principles. It has been claimed that the cost-based pricing methodologies used by the subject airports are likely, within certain limits, to be Ramsey-compliant. Although their charging schedules appear, in very broad terms, to meet Ramsey requirements, Ramsey prices are in fact sensitive to variations in demand price elasticities. Hence, it is questionable whether pricing schedules set purely upon the basis of cost allocations would come as close as would be desirable to those required.

However, at this stage the Commission has insufficient information to make a judgement either way.

CROSS-SUBSIDISATION

9.41. As airports are multi-product businesses, and serve a variety of customers, there is potential for cross-subsidisation to occur. Broadly speaking, a cross-subsidy arises where one user or group of users or service subsidises another, so that the latter does not bear all of the cost of its supply. From an economic efficiency perspective, a cross-subsidy is paid if the incremental revenues associated with an activity are below the incremental costs or above the stand-alone costs of providing that activity.

9.42. The Commission considers it desirable to ensure that the right costs are attributed to airfield activities, and the revenues attributed to airfield activities cover the costs of airfield activities.

9.43. Because of the throughput of passengers generated by airfield activities, airports typically undertake other integrated aeronautical activities (such as the provision of terminal facilities) together with significant complementary commercial activities (such as the provision of retail and commercial premises). As the airfield activities of the three airports have been found to be subject to lessened competition, there may be scope for any excessive profits earned in that activity to be used to subsidise other activities in which the airport faces more competition. Alternatively, as evidenced from overseas, airfield activities may be subsidised from an airport's earnings in non-airfield activities.

9.44. Where an entity faces little or no competition, cross-subsidisation is sometimes judged in the context of the contestability model. Here, a cross-subsidy arises if the incremental revenue earned from the sale of a given product are either below the incremental costs, or are above the stand-alone cost, of supplying that product in its entirety. In a contestable market a firm would not charge a price lower than a floor set by the average incremental cost (AIC), as its revenues would not cover its costs, nor above a ceiling set by the average stand-alone cost of providing the product in isolation, as this would invite new entry.

9.45. Applying this model in the airport context, the incremental costs of airfield activities would be the additional costs that hypothetically the airport would incur by providing that service, in circumstances where it did not currently do so, but where it supplied all other services, and consequently bore the common costs of those services. The stand-alone cost of airfield activities is hypothetically the cost that an airport would incur in providing only that service, including any common costs that could not be avoided. They are the minimum costs that an efficient operator would incur in providing that service. The difference between the incremental and stand-alone costs as defined are the common costs associated with airfield activities. Leaving aside the issues as to which cost components should be included in the assessment of incremental and stand-alone costs, and the extreme long-run perspective of the model in the airport context, the discussion above suggested that the unavoidable common costs associated with airfield activities are, in fact, likely to be quite low. This suggests that the incremental and stand-alone costs are not likely to differ greatly.

9.46. Cross-subsidisation between airport activities is often discussed in the context of "single", "dual" or "multiple tills". As recognised in chapter 6, debate over the number of tills raises considerations that go beyond the scope of the Commission's inquiry. However, the scope for cross-subsidisation is potentially minimised or eliminated by the use of a dual or multiple till approach, especially where that is reinforced by a ring-fencing framework (for example, segment financial reporting) as is the case in New Zealand currently.

9.47. Any cross-subsidisation of non-airfield activities by airfield activities would raise concerns—the price of airfield activities may be greater than stand-alone cost. By examining the allocation of assets, costs and revenues between airport activities, the Commission has endeavoured to determine whether any cross-subsidisation of non-airfield activities is occurring. It particularly focused on AIAL's use of ACAM to allocate costs across airport activities.

9.48. With regard to AIAL's use of ACAM, the Commission's preliminary view is that the results produced do not appear to result in any cross-subsidisation of non-airfield activities by airfield activities. Costs common to both airfield and non-airfield activities are allocated based on the proportion of revenue generally derived from those activities. The costs apportioned to airfield activities are less than stand-alone costs.

9.49. The Commission has also reviewed the cost allocations of WIAL and the pricing model recently used by CIAL. It has not found any evidence of cross-subsidisation for either airport.

9.50. The Commission's preliminary view is that there is no evidence to suggest that there is cross-subsidisation of non-airfield activities by airfield activities.

CONCLUSION

9.51. This chapter considered two questions: is the structure of airfield pricing the allocatively efficient one? And does the structure of prices lead to cross-subsidisation? On the first question, it was argued that as the marginal cost of an aircraft movement is very low, airports would ideally seek to recoup their large fixed costs by putting mark-ups on marginal cost that reflected each aircraft's willingness to pay—in other words, to set Ramsey prices so as to minimise the loss of allocative efficiency resulting from pricing above marginal cost. It was found that the subject airports (in common with overseas' practice) use complicated cost allocation models to allocate the airfield costs to different weight classes of aircraft, and to charge those weight classes in such a way as to recoup those costs. Each aircraft is charged on the basis of its MCTOW, with the cost per MCTOW increasing through the weight classes. It has been claimed overseas that the resulting charges broadly reflect Ramsey prices. While there may be some truth in that statement, it cannot be that all of the costing models—which at best only attempt indirectly to set Ramsey prices, and differ significantly one from another—lead to this desired outcome. There appears to be no attempt to integrate information about demand elasticities into price-setting. It may be that any efforts to do so would be hindered by international accepted practice and New Zealand's bilateral obligations.

9.52. On the issue of cross-subsidisation, it was considered that the scope for cross-subsidisation between aircraft classes was limited, as it is unlikely that charges would be set below marginal cost. There appears to be more scope for cross-subsidisation between different airport activities, and indeed overseas the use of the single till encourages such behaviour. On the other hand, dual and multiple till systems, under which each activity has to recoup its costs from its own revenues, are likely at least to limit the scope for cross-subsidisation. However, as noted in chapter 6, this raises issues potentially outside of the scope of the Commission's inquiry. The Commission notes that present regulations encourage the subject airports to maintain multiple tills, and that approach could be reinforced if cross-subsidisation were thought to be a problem.

9.53. The following comments are sought in connection with the views on airfield pricing presented in this chapter:

- Is the Commission's assessment of the allocative efficiency of the structure of the landing charges of AIAL, WIAL and CIAL correct?

- Is the Commission's assessment of the airports' approaches to cost allocation correct?

- Is the Commission's assessment of the extent of compliance with Ramsey pricing correct?

- Is the Commission's assessment of whether there is any evidence of cross-subsidisation associated with the supply of airfield activities at Auckland, Wellington and Christchurch International Airports correct?

10. PERFORMANCE ANALYSIS

INTRODUCTION

10.1. In chapter 9, the efficiency of the structure of the prices for airfield activities supplied by AIAL, WIAL and CIAL was considered. In this chapter the focus is a broader one, namely the evaluation of the overall economic efficiency of the airfield activities supplied by each of the three airports. This provides the critical analysis and results are used to determine in chapter 13 whether, in terms of section 52, price control may be necessary and desirable in the interests of acquirers of airfield activities. The same analysis and results also inform the efficiency considerations which feed into the determination in chapter 14 as to whether price control should be recommended by the Commission.

10.2. In chapter 6, the competitive market model was used to explain the three dimensions of economic efficiency, the attainment of which makes for good economic performance. These are allocative, productive and dynamic efficiencies. Allocative efficiency concerns the overall level of prices, and whether they are too high, resulting in excessive profits and output below the optimal level. Productive efficiency requires that the cost of any given output be minimised, so that resources are not wasted. Dynamic efficiency occurs where firms adopt new products and processes in a timely fashion, and continue to invest to ensure that capacity matches demand. The purpose here is to attempt, as far as data permits, to measure the performance of the three airports in terms of these three dimensions of efficiency, together with the distributional effects of any excessive returns.

10.3. The data available are of three kinds. First, there are historical data for each of the airports going back to the year of their individual corporatisation. Although these data are incomplete, it can be used, by comparing actual and target returns, to shed light on whether the airports have earned excess returns on airfield activities in the past. The information examined in chapters 7 and 8 on asset base and weighted average cost of capital (WACC) is used in this process. This approach provides an historical perspective on the performance of the airfield activities provided by the airport companies.

10.4. The second source of data that can be used to assess performance are the current prices and costs, and the reported output levels of airfield activities for the 2000 financial years of the airports. These data, combined with the relevant models, can be used to estimate the potential extent of monopoly pricing and allocative in efficiencies for the airports' 2000 years (prices prior to recent increases for AIAL and CIAL).[139] A limitation of this approach is that it is based on only one year's figures, which may be unusally high or low. However, it does provide a stepping stone from which an extrapolation of current and future monopoly pricing and allocative inefficiencies can be made. Other data on assets can further be used to indicate the possible magnitudes of productive and dynamic inefficiencies.

---

[139] The Commission notes that its analysis of WIAL is based on the year ended 31 March 2000 rather than 2001 because the necessary data on WIAL for 2001 is not available until its information disclosures are released in a month or so.

10.5. The third source of data are those relating to current and anticipated future prices. Both AIAL and CIAL have recently implemented price increases, and the former has announced that further price increases are in the pipeline. These increases provide the basis for projecting future trends in profits and allocative efficiency.

HISTORICAL RETURNS

Introduction

10.6. From an economics perspective, airports should be able, on average over time, to earn a normal return on the optimised assets used in providing the services of airfield activities. In chapter 8, an appropriate WACC was determined for the airfield activities of each airport. WACC is used to determine the normal or target return on airfield activities' assets for each of the three airports, on the grounds that a return equal to the WACC for an entity is a return that is commensurate with the opportunity cost of capital for that entity. An actual return in excess of an appropriate target WACC would suggest that the entity was earning an excessive or monopoly return, unless those returns reflected superior performance.

10.7. The issue of normal returns is closely associated with allocative efficiency, at least in the second-best sense that the term is used below. In competitive markets, in the short run, any returns in excess of (less than) normal returns could reflect superior (inferior) performance, or windfall gains (losses) caused, for example, by short-term fluctuations in demand and supply. However, in the long-run, competition would be expected to force prices to the allocatively efficient level where all costs would just be covered, including a normal return on the capital assets used by the business. In contrast, under monopoly, prices would be expected to be held persistently above costs, even in the long-run, resulting in a loss of allocative efficiency and a redistribution of wealth from acquirers to suppliers.

10.8. As a general principle, rate of return figures must be used with care when assessing efficiency, as the profit figure used as the numerator is a residual figure calculated as the difference between revenues and costs. Profits, and hence returns, thus reflect changes in both revenues (pricing) and costs. A firm with market power may earn high returns by raising prices rather than lowering costs. Alternatively, excess profits might be present, but be absorbed in higher costs, so that allocative inefficiency is both obscured, and augmented by a further loss in the form of productive inefficiency. For these reasons, it is necessary to check the efficiency with which resources are being used. This can change over time.[140]

The Assumptions Used

10.9. The Commission has conducted an analysis of the historical returns of the airfield activities of the three airport companies over the period since corporatisation, comparing actual with target (WACC) returns. The Commission's preliminary views on the relevant asset bases of the airports (chapter 7) and on their respective WACCs (chapter 8) are used in the analysis. The results of the analysis are summarised and

---

[140] David Parker, *The Performance of BAA Under Privatisation and Regulation*, Centre for the Study of Regulated Industries, Occasional Paper 8, July 1999, p 11.

evaluated below. For full details of the data used and of the analyses for each airport, readers are referred to appendices 8, 9 and 10. These include an analysis of the sensitivities of the results below to different assumptions, or scenarios, regarding the appropriate asset base, which are not reported below.[141]

10.10. The actual rates of return earned by the airports on airfield activities are measured by the accounting rate of profit (ARP). The ARP is specifically designed to produce a figure that is conceptually comparable to nominal, after-tax WACC. By this means, actual and target returns could be compared. The first step towards calculating ARP involves computing the annual net operating profit after tax (NOPAT). The Commission has assumed conservatively that profits on airfield activities are tax at 33%, even though an airport company as a whole could have paid a lower effective tax rate.

10.11. NOPAT was computed for airfield activities at each of the airports for each of the relevant years. NOPAT is computed by deducting tax from earnings before interest and taxes (EBIT). EBIT is determined for each year based on a combination of data sourced from the published financial statements of the airports, recent disclosure financial statements, and additional information supplied by the airports to the Commission. Where gaps exist in revenue and expense data made available by the airports, the Commission has extrapolated from the data available to derive estimates for the missing figures (these estimates are italicised in appendices 8-10). Assessed annual revaluations of the assets of airfield activities' are recorded as income, and have been added to NOPAT.

10.12. The revaluations of airfield assets undertaken by the airports have been adjusted according to the valuation methodology and level of optimisation considered appropriate by the Commission to determine total appropriate revaluations. Assessed annual revaluations by the airports are calculated by apportioning total appropriate revaluations across time. The apportionment of total appropriate revaluations is based largely on general inflation in the economy, on the assumption that inflation is largely causing the increase in replacement cost, with any residual apportioned in a linear manner. This required that the increases in asset values due to inflation being determined by multiplying the inflation rate for the relevant period by the opening asset value (excluding revaluations), a methodology that essentially arrives at indexed historic cost values. An adjustment was then made to the difference (if any) between the total appropriate revaluations and the total revaluations based on inflation, by spreading it back evenly across the years to the last revaluation.

10.13. The value of the asset base used by airfield activities at each of the airports was determined in chapter 7, based on the use of the appropriate asset valuation methodology, depreciation and optimisation of assets. The starting point for that process was the values adopted by the airports from their latest valuations. As with EBIT, asset values were determined for each of the relevant years based on a combination of data sourced from the published financial statements of the airports, recent disclosure financial statements, and additional information supplied by the

[141] The Commission believes that the appropriate valuation approach for each airport is as follows: scenario 8 (appendix 8) for AIAL; scenario 3 (appendix 9) for WIAL; and scenario 6 (appendix 10) for CIAL.

airports to the Commission, as well as the recent asset valuation reports. Where gaps exist in asset data made available by the airports, the Commission has extrapolated from the data available to derive estimates for the missing figures (these estimates are italicised in appendices 8-10) For the purposes of optimisation, the Commission has assumed that all the airfield development land has been held since corporatisation. Assessed annual revaluations (as appropriate) were cumulatively added to the asset base.

10.14. The ARP was computed both annually, and as an average, over the period since corporatisation. Assessed annual revaluations were included as and where appropriate. However, an interest tax shield adjustment was not included in the Commission's calculation as the interest expense could only arbitrarily be apportioned across an airport's activities. Thus, ARP was computed using the following formula:

$$\frac{\text{NOPAT + Revaluations}}{\text{Appropriate Asset Base} - (\text{Revaluations}/2)}$$

10.15. The ARP or actual return figures for airfield activities at each of the three airports can then be compared to their corresponding WACC or target returns, calculated using the relevant risk-free rate for each period. This is done in the next section.

The Results

10.16. The Commission's assessment of the actual annual returns earned on airfield activities by the three airports, and the appropriate target returns, are summarised in table 40. The figures are averages for the period from corporatisation (1989 in the case of AIAL and CIAL; 1991 for WIAL) until 2000, and are based on optimised asset valuations.

Table 40
Average Assessed Annual Returns on Airfield Activities at Each Airport Since Corporatisation

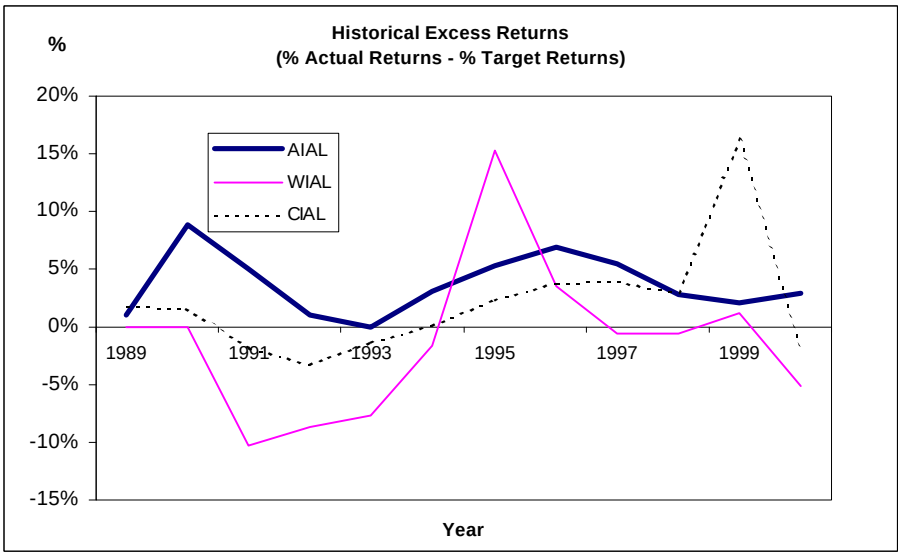
	Actual Returns	Target Returns	Excess Returns
AIAL 1989-2000	13.47%	9.76%	3.71%
WIAL 1991-2000	6.54%	8.15%	0
CIAL 1989-2000	11.65%	9.64%	2.01%

10.17. The figures in table 40 suggest that both AIAL and CIAL have earned annual returns that have exceeded target returns on average over the 12 year period since corporatisation. The excess returns for AIAL average 3.71%, which is equivalent to 38.03% of the average target return. The corresponding figures for CIAL are 2.01% and 20.84% respectively. In contrast, the actual return for WIAL averaged over the 10 year period since corporatisation falls below the average appropriate return, indicating that WIAL has not, on average, achieved the appropriate target return. In other words, its excess returns have been negative.

10.18. Table 40 shows averaged returns. The corresponding annual figures, summarised as the percentage point differences between the actual and appropriate returns, are shown in chart 3. These indicate that on the basis of the Commission's assessment, AIAL and CIAL have earned excess returns in most years since corporatisation.For WIAL returns have been mainly below target.

10.19. The two 'spikes' in chart 3 reflect the impact of revaluations. As noted above, revaluations have been spread over the period to the last revaluation (or of corporatisation if appropriate). Where frequent revaluations have been undertaken it follows that the revaluations will be spread over short periods of time (often only one year), and where the revaluation is large for a given year (as with the 1995 for WIAL and 1999 for CIAL) a spike results.

Chart 3



10.20. On face value, these findings suggest the preliminary conclusion that both AIAL and CIAL have exploited their market power in airfield activities by raising prices above the competitive level in a fairly sustained fashion. It would appear to be difficult to argue that the period for review biased the findings by, for example, being too short a time in which to assess market power. In contrast, WIAL's prices have on average been below the competitive level.

EFFICIENCY IMPLICATIONS OF 2000 YEAR PRICES

10.21. Averaged annual historical data are useful for evaluating the pricing behaviour of airports in the past, but the returns fluctuate considerably from year-to-year over the period, and may be a poor indicator of present and future behaviour (although the presence of excess returns reveals an ability and willingness to set prices above the competitive level in the case of two of the airports). The Commission has examined the results of each airport's 2000 financial year in more detail. It has endeavoured to quantify the potential excess returns and inefficiencies implied by prices for airfield activities at each airport in their 2000 financial year.

10.22. The Commission has chosen the year 2000 as a base year for introducing the models which will be used for calculating the efficiency effects of pricing in that year. The year 2000 also provides a base year from which to project future excess returns and inefficiencies. These future projections are discussed in a separate section below.

10.23. The approach is designed to be consistent with the historical analysis. In particular, it takes into account any unrealised capital gains or losses and taxation.

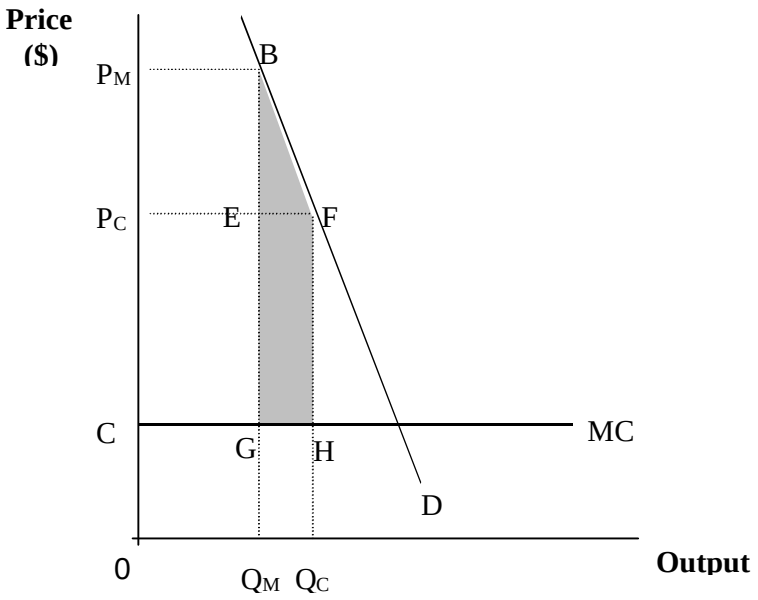
Allocative Inefficiency and Excessive Returns

A Model

10.24. Given the inelastic demand for airfield services (estimated as –0.105 in chapter 5), large price increases could potentially be achieved with minimal output reductions. Deadweight losses (DWL) associated with monopoly pricing would emerge in the market for airfield services, but these would be likely to be small relative to the size of the distribution effects. These effects are explained in chart 4, which shows in a stylised way the demand and cost structure of a typical, single runway, airport.

10.25. The vertical and horizontal axes of the chart are scaled in terms of the average price per tonne, and the number of tonnes landed, respectively. The cost structure of the airfield activities is such that fixed costs make up a large proportion of total costs, while marginal costs are very low so long as excess capacity exists. The point at which the demand curve (D) meets the price axis is not shown on the chart, but is termed point A. The demand curve is assumed to be linear for simplicity.

Chart 4
Estimating Allocative Inefficiency in the Aircraft Movement Market



10.26. An airport must cover all of its costs, including its fixed and overhead costs, so the competitive average price is assumed to be set well above marginal cost (MC) at P_C, with output at Q_C (P_C includes an appropriate level of normal returns reflecting an appropriate asset base and cost of capital). In other words, if the airport's average cost curve were to be added to the chart, it would slope downward and intersect the demand curve at point F, the downward slope reflecting the "spreading of overheads" over the larger landed tonnage. At this position, gross surplus would be represented

by the area $OAFQ_C$, from which variable costs of $OCHQ_c$ have to be deducted. The remaining net surplus (or net benefit from production) is split between acquirers' surplus of P_CAF, and suppliers' surplus of CP_CFH, the latter covering fixed costs, including the normal returns.

10.27. Monopoly pricing would be reflected in the price being raised above the competitive level to, say, P_M, with output in consequence shrinking to Q_M. This would result in a loss of net surplus equal to the shaded area BFHG. This loss is shared between acquirers' consumer surplus of BFE and the supplier's producer surplus of EFHG. The resources no longer required because of the reduction in output, represented by the area GHQ_CQ_M, are assumed to be absorbed elsewhere in the economy, with no impact on welfare. The additional surplus gained by the supplier at the expense of acquirers, depicted by area P_CP_MBE, is a wealth transfer from acquirers. In efficiency terms, this transfer has no direct effect, since one party gains at the expense of the other. Hence, the detriment arising from the loss of allocative efficiency in the aircraft movement market is represented by the area BFHG. The supplier earns excess returns ("monopoly profits") equal to the value of area P_CP_MBE.[142]

10.28. The low price elasticity of demand for airfield services suggests that the output decrease between Q_M and Q_C could be quite small. This would suggest that the transfer of wealth from suppliers to acquirers, as represented by the area P_CP_MBE, associated with monopoly pricing would be likely to greatly exceed the loss of allocative efficiency, denoted by area BFHG. By the same token, an attempt to return prices to the competitive level through the use of price control would, if successful, reverse these changes. The wealth transfer would revert back to acquirers, and allocative efficiency would improve by BFHG. From a narrow acquirers' perspective, they would benefit from the lower prices by the gain in consumers' surplus P_CP_MBF.

10.29. The model in chart 4 was applied to each of the three airports in an attempt to estimate the magnitudes of these pricing effects. The model is flexible in that the results do not vary with respect to how the output is defined.

Determining P_C and P_M

10.30. As discussed in chapter 9, the airports differentiate their landing charges by aircraft weight bands, with a different price per tonne in each band (and in some instances different prices for international aircraft versus domestic). For the purposes of the analysis here, the Commission has calculated an average price per tonne for each of the airports 2000 years. This is tantamount to assuming that when the total landed tonnage changes, the tonnages in all weight bands change by the same proportion. These average prices are calculated based on the landing charge revenues and tonnes landed in the 2000 financial year for each airport. They do not include the recent price rises at AIAL and CIAL, the announced price rises at AIAL in each of the next two years, or changes that could be made by WIAL as a result of its impending

[142] This analysis assumes for simplicity that the AC curve is actually horizontal, rather than downward sloping, in the range between points E and F. In any case, given the price inelastic demand curve, the output difference between the two points is unlikely to be significant, so that the average costs at those two pints are likewise not expected to differ significantly.

consultation. The prices correspond to price P_M in chart 4 (although P_M may be above or below P_C). P_M does not include other revenues (other than landing charges) earned in respect of airfield activities. These relatively small amounts were, however, included in the historical analysis of excess returns. They do not significantly affect the results or change the ultimate conclusion.

10.31. The calculation of the price corresponding to P_C in chart 4 involved measuring the size of the area P_CP_MBE, and dividing it by Q_M (actual output) in order to derive the distance P_MP_C, the amount by which the average price exceeded the competitive price. This could then be deducted from the 2000 year price to arrive at the competitive price. The calculation of P_CP_MBE—the dollar value of excess returns—started with the determination of the actual returns on airfield activities for the 2000 financial year for each airport. This was done by subtracting from airfield revenues airfield expenses (including taxation). Airfield expenses were adjusted by subtracting or adding any unrealised capital gains or losses. From that figure was deducted total normal airfield returns, which were calculated multiplying together the Commission determined appropriate asset and WACC. The figure so derived was area P_CP_MBE.

10.32. By assuming a value for the price elasticity of demand, the drop in price from P_M to P_C could then be calculate the corresponding increase in output. By assuming that MC is in fact zero (rather than being very small), the various areas of significance in the chart could then be calculated.

10.33. AIAL can be used for the purposes of illustrating how the competitive price was determined. The company's total expenses (including taxation) for airfield activities' for the year (there were no unrealised capital gains or losses in 2000) were subtracted from the revenues generated by that activity. This equalled $16,982,490. From this figure was deducted an estimate of the normal returns on the activity, which was calculated by multiplying the Commission's estimates of the asset base and appropriate WACC ($15,692,550). The resulting residual is a measure of the excess returns on the activity (P_CP_MBE) which, when divided by current output, equals the difference between P_M and P_C ($0.28). This figure can then be deducted from the current price (P_M), found by dividing total revenue by output ($4,505,896), to arrive at the competitive price (P_C = $9.52). Similar calculations were performed to find the current competitive prices at WIAL and CIAL.

10.34. The results of these calculations are presented in table 41. For each of the three airports the price per tonne for airfield activities for their 2000 financial years can be compared to the estimated competitive price.[143] This shows that the 2000 price at AIAL was about 2.99% above the competitive level. While WIAL's and CIAL's prices were about 33.98% and 10.31% below the competitive level, respectively.

[143] Readers should refer to appendices 8, 9 and 10 for the detailed basis of calculations presented in this chapter.

Table 41
Average Prices Relative to Competitive Benchmark Prices for the 2000 Financial Year of Each Airport

	2000 Price (P_M)	Competitive Price (P_C)	Difference, P_M-P_C
AIAL	$9.80	$9.52	$0.28
WIAL	$10.19	$15.44	-$5.24
CIAL	$ 4.63	$5.17	-$0.53

Determining Q_C

10.35. In terms of chart 4, the '2000 year' price and output—P_M and Q_M respectively—are 'known' in the sense that they are the outcomes for the 2000 financial year by each airport. The competitive price, P_C, has just been calculated above, reflecting the Commission's views on WACC and asset base. Assuming a demand curve with a price elasticity of –0.105 in the relevant region, the corresponding competitive output, Q_C, can be estimated using the following elasticity equation and solving for Q_C:

$$\frac{Q_c - Q_m}{q_m} \times \frac{P_m}{P_c - P_m} = \varepsilon$$

where: ε = price elasticity of demand

10.36. The results of these calculations are summarised in table 42.

Table 42
Current Output and Estimated Competitive Output (Tonnes Landed) for the 2000 Financial Year of Each Airport

	2000 Output (Q_M)	Competitive Output (Q_C)	Difference, Q_C-Q_M
AIAL	4,505,896	4,519,639	13,743
WIAL	1,274,078	1,205,233	-68,845
CIAL	2,175,209	2,148,943	-26,266

Estimates of Allocative Inefficiency and Excess Returns

10.37. The series of calculations above have provided the information to calibrate the model in chart 4. The model can now be used to estimate for each of the three airports the potential allocative inefficiencies and excess returns associated with their (pre-increase) 2000 price levels. Because the precise values of marginal cost are not available, although they are known to be very low, it has been assumed that marginal cost is zero. This is likely to mean that the estimates made here are slightly overstated.[144] It is also assumed for the time being that there are no productive inefficiencies or cost misallocations, and that appropriate levels of service quality are being provided (to be discussed below).

[144] In terms of chart 4, the affect of assuming MC= 0 means that the allocative efficiency loss increases by the addition of area GH Q_C Q_M, although that area is thought to be relatively small

10.38. On this basis, the Commission has estimated that the likely sizes of the allocative inefficiencies associated with pricing of airfield activities in the 2000 financial year of each airport. The results are summarised in table 43.

Table 43
Estimated Allocative Inefficiencies for the 2000 Financial Year of Each Airport

	Lost Consumer Surplus ($)	Lost Producer Surplus ($)	Total Allocative Inefficiency ($)
AIAL 2000	1,956	130,767	132,723
WIAL 2000	0	0	0
CIAL 2000	0	0	0

10.39. The "lost consumer surplus" column in table 43 refers to the area BFE in chart 4, and "lost producer surplus" refers to area EFHG. These combined make up the total allocative inefficiency or deadweight welfare loss. The "0" entries for WIAL and CIAL are reflective of the fact that their 2000 year prices were less than the relevant competitive one in 2000.

10.40. In addition, the excess returns stemming from prices being above the competitive levels cause a redistribution of wealth from acquirers to suppliers, as measured by area $P_C P_M BE$ in chart 4. Estimates of these distribution effects are given in table 44. These transfers are proportionally much larger than the associated allocative inefficiencies, as would be expected.

Table 44
Estimated Excess Returns for the 2000 Financial Year of Each Airport

	Excess Returns ($)
AIAL 2000	1,282,653
WIAL 2000	0
CIAL 2000	0

Qualifications to Results

10.41. Apart for the assumptions referred to above, there are a number of general issues could also impact upon the estimates made of present (and future) allocative inefficiencies and excess returns.

Productive Inefficiencies

10.42. The Commission has not attempted to incorporate productive inefficiency in the analysis either of historical returns, or in the model above. It is assumed implicitly that costs are minimised. However, if costs were actually above their efficient level, adjustment for this factor would have the effect of lowering P_C (since P_C is found where average cost intersects with demand). This in turn would imply a greater level of Q_C, and hence larger allocative inefficiencies and wealth transfers. Productive inefficiencies are considered separately below.

Spill-Over Effects

10.43. The presence of excess returns and allocative inefficiency losses in the aircraft movement market is likely to lead to some further inefficiencies in the form of spill-over effects. These could arise in two different ways. First, the additional profits accruing to the airport could be wasted on relatively inefficient new investment spending, or through inflated operating costs, because of a subsidy effect. The incentives to invest wisely and contain costs may be reduced when profits are excessive.

10.44. Secondly, outcomes in down-stream markets related to the aircraft movement market will be distorted. Such markets could include those servicing domestic passenger travel, international passenger travel, domestic freight, and international freight. Where these are competitive, even small rises in costs may have significant output effects, creating dead-weight losses in both those markets, and in further markets again that are associated with them.[145]

10.45. Although these effects are difficult to measure, they should be incorporated into the assessment of the effects of monopoly pricing to the extent possible.

Service Quality

10.46. The focus here on price carries with it an implicit assumption that service quality is maintained at the level that acquirers desire, and are prepared to pay for. The airports that the subject of this inquiry currently provide information on interruptions to their services, pursuant to the disclosure requirements in the Airport Authorities (Airport Companies Information Disclosure) Regulations 1999. The number and duration of interruptions disclosed cover those relating to runway services, stand position services, airbridge services, and baggage handling systems.

10.47. Of the above disclosures, runway interruptions are a relevant indicator of the service quality of airfield activities. Such interruptions appear to have been infrequent, and do not appear to suggest inferior service quality. It is assumed in the calculations above that this quality would be maintained when price falls.

Future Costs and Returns

10.48. The analysis of the 2000 year only provides a snapshot of the pricing of airfield activities by the three airports. Determining the future impact of recent price rises and announced future price rises at AIAL and CIAL is examined below.

Productive Inefficiency

10.49. A productively efficient operation is one that meets demand at the lowest possible cost. For the airfield activities at each of the three airports, where the investments in assets, many of them sunk, have already been made, the concern is with the appropriateness of the levels of operating expenses incurred. The major operating

[145] The effects may be smaller in the associated markets, but are more dispersed and could potentially create a significant cumulative effect.

expenses are depreciation, repairs and maintenance, and employee remuneration, together with operating costs of the rescue fire services.

10.50. Of these operating expenses, all but depreciation would appear to be potentially susceptible to productive inefficiency (ignoring here that portion of depreciation relating to any assets that should be optimised out). These might arise, for example, because of overly lavish maintenance expenditures, over-staffing, or excessive levels of staff remuneration.

10.51. The impact of productive inefficiencies in the airfield activities of an airport can be modelled by further developing chart 4, as shown in chart 5. The further assumptions built into the model are as follows:

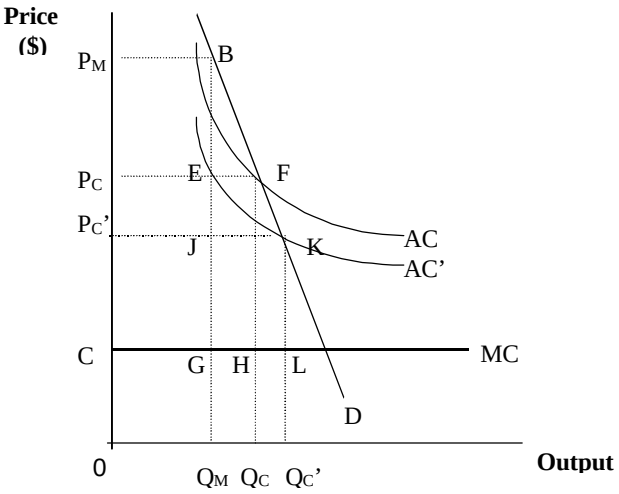
- The airport is initially assumed to be maximising profits with its price at P_M and output at Q_M. The competitive price and output is assumed to be found, as before, at the point where the existing average cost (AC) curve intersects with the demand (D) curve.

- The operating expenses referred to above are assumed for simplicity to be fixed in nature (i.e., not to vary with output), although that is not strictly correct for all elements.

- The marginal cost curve reflects minimum costs, and because it is assumed to be horizontal, it equals average variable costs. All productive inefficiency is assumed to be felt in fixed costs, so that average fixed costs are inflated, and the AC curve is too 'high'. The level of the average cost curve when costs are minimised is at AC'.

- As a result, in a competitive market when costs are minimised, the price and output would be at P_C' and Q_C' respectively, rather than at P_C and Q_C as assumed in chart 4.

Chart 5
Productive Inefficiency in the Aircraft Movement Market



10.52. The inefficiently high level of fixed costs results in welfare effects then can be analysed at two levels. First, as a productive inefficiency, the wastage of resources is an outright loss, as their transfer to other productive employments would lead to no loss of output in airfield activities. In terms of chart 5, this loss is measured at a given output by the vertical distance between AC and AC', multiplied by that output. Secondly, in a competitive setting the inflated costs would not be present, so that the competitive average cost curve would be AC', not AC as assumed so far. This in turn would mean that the competitive price and output would be P_C' and Q_C' respectively, not P_C and Q_C as assumed. As a consequence, the allocative inefficiency loss and wealth transfer flowing from price at P_M being above the competitive level is larger than previously estimated. The allocative efficiency loss increases from BFHG to BKLG, and the transfer increases from P_CP_MBE to $P_C'P_MBJ$.

10.53. There is likely to be some room for improvement in the productive efficiency of the airfield activities at each of the three airports, although on present information that is impossible to quantify. For the purposes of illustration only, if 1% of airfield expenses (excluding depreciation) were to be an appropriate measure of productive inefficiency, then the losses of productive efficiency at each of the three airports would be as presented in table 45.

Table 45
Potential Productive Inefficiency at Each Airport, Per Annum

	Potential Benefits ($)
AIAL 2000	131,910
WIAL 2000	45,630
CIAL 2000	60,660

Dynamic Inefficiency

10.54. Dynamic efficiency relates to investment, and to the quantity and quality of assets used by an entity. Inefficiencies can arise where investment has led to too many assets being acquired—meaning that some assets are not "used or useful" in meeting demand—or because some assets are overly lavish for the purpose (assets are said to be "gold plated"). Given the nature of airfield activities, the former is more likely to be a potential source of dynamic inefficiency than the latter. The issue then becomes one of whether the optimal amount of assets is being used to provide the service.

10.55. As noted earlier, there appears to be some over-investment by the airports in airfield activities. Excess assets were optimised out of the asset base in chapter 7, and it was this optimised asset base that was used for the purpose of analysing static allocative inefficiency, as discussed above. However, there remains the dynamic implications of the poor investment decisions implicit in the presence of optimised out assets.

10.56. The Commission has attempted roughly to quantify the extent of these dynamic inefficiencies at each of the three airports. This was done by first determining the optimised out assets. Table 46 summarised the assets at each airport that were optimised out.

Table 46
Optimised Out Assets

AIAL	Land held for second runway and seabed
WIAL	None
CIAL	Land held for development

10.57. The presence of excess land holdings implies sub-optimal use of this land. The size of the dynamic inefficiencies attached to these assets has to be quantified. The Commission's approach has been to use evidence of faulty investment decisions in the past as a basis for predicting further such decisions in the future.

10.58. The excess land holdings in question may be valued by an airport on the basis that its best alternative use would be for housing, in which case a relatively high value is imputed to the asset. However, such land is often used by the airport for farming purposes—for example, it may be cut for hay—and so yields a return likely to be lower than in the best alternative employment. This lower return implies a lower valuation for the land in its current use. Hence, the dynamic inefficiencies attached to optimised out land can be measured by the difference between the percentage return currently earned by the land, and the higher return the land could earn based upon its alternative use, as indicated by its valuation in the airport's accounts.

10.59. The Commission has estimated the annual returns to the optimised out land in its present use. Those amounts are about $400,000 at AIAL and about $156,444 at CIAL. Assuming a risk free discount rate of 6.92%, and treating the returns as a perpetuity (since land does not depreciate), yields a valuation for the land in its current use of $5.78 million at AIAL and $2.26 million at CIAL.

10.60. In contrast, the valuations imputed by the two airports to the optimised out land at AIAL and CIAL are $102.7 million and $2.97 million respectively. These valuations exceed the current use valuations for AIAL and CIAL by $96.8 million and $0.71 million, respectively. The differences between the two valuations indicate the extent to which the land is being misallocated. These differences need to be converted into annual equivalent values, so that they can be compared with other efficiency effects expressed in annual terms. This is done by calculating the perpetuity which, when discounted at the risk free rate of return, equals the difference. The resulting perpetuities are $6.7 million for AIAL, and $49,218 for CIAL. These figures are taken to represent the dynamic inefficiencies currently being experienced at the two airports. It is assumed that these are suitable measures of dynamic inefficiencies in the future.

10.61. The estimates of dynamic inefficiencies in airfield activities per annum at each of the three airports, calculated as described above, are presented in table 47.

Table 47
Potential Dynamic Inefficiency at Each Airport, Per Annum

	Potential Benefits ($)
AIAL	6,711,684
WIAL	0
CIAL	49,218

10.62. The Commission is sceptical as to whether the sea bed at AIAL has an alternative use. However, for present purposes the assumption was made that the current book value of the sea bed is reflective of its best alternative use. The current use valuation was assumed to be zero.

10.63. Clearly, the present airport companies may not be fully responsible for all of the past decisions relating to the acquisition or use of the optimised out assets, with some decisions being made prior to corporatisation. However, even where this is the case, the airports have the option either of divesting the surplus land and returning the funds to shareholders, or of finding alternative, more productive, uses for it. They have not chosen to do either.

PROJECTIONS BASED ON RECENT PRICE INCREASES

10.64. Prices for airfield activities have been increased recently by both AIAL and CIAL, and according to the announcements of AIAL, prices will increase further over the next two years. This provides scope for projecting returns and allocative efficiencies at those airports for this period ahead, providing that reasonable assumptions can be made about the determinants of the competitive price.

10.65. An increase of 8.5% in charges was introduced as of 1 September 2000, and further 5% increases are planned on 1 September 2002 and 2003. This means that the price at AIAL is currently $10.63 ($9.80 x 1.085); in 2002 it will be $11.16 ($10.63 x 1.05); and from 2003 it will be $11.72 ($11.16 x 1.05). These calculations assume that the price rises apply equally to all acquirers.

10.66. For CIAL, prices rose on 1 January 2001. The Commission has calculated that the current average price being charged at CIAL is $7.55, based assumptions of a continuation of the same aircraft mix landing in 2000 in future years and on the growth in aircraft landings projected by CIAL for 2001.

10.67. WIAL's 2000 year price does not change because it has made no price increases recently and has announced no future increases.

10.68. In estimating the future competitive price at AIAL, CIAL and WIAL, the Commission has had to make certain assumptions regarding the determinants of P_C. The Commission has assumed that over the next few years the asset base and operating costs will remain constant at 2000 year levels. The Commission has also assumed that there are unlikely to be unrealised capital gains or losses into the future. These assumptions seem supportable for the following reasons:

- The asset base is unlikely to change significantly, particularly because the Commission has adopted a historical costs approach to a significant proportion of the asset base.

- Expenses may rise because of inflation, although current inflation expectations are modest.

10.69. The Commission has also assumed in forecasting P_C that growth of output at CIAL is as projected in its recent consultation model. In the absence of publicly-available

estimates of growth in output at AIAL and WIAL over the coming years, it is convenient to assume for AIAL and WIAL that output remains the same as for the their 2000 financial years.

10.70. Using these actual and announced price increases and forecast competitive price allows the projection of future allocative inefficiencies and of excess returns at AIAL, CIAL and WIAL, as shown in tables 48 and 49, respectively.

Table 48
Projections of Estimated Future Allocative Inefficiencies for AIAL and CIAL, Per Annum

	Lost Consumer Surplus ($)	Lost Producer Surplus ($)	Total Allocative Inefficiency ($)
AIAL			
Year 1	15,802	367,123	382,925
Year 2	30,459	506,333	536,792
Year 3	49,929	644,344	694,273
WIAL	0	0	0
CIAL Years 1-	44,313	315,578	359,891

Table 49
Estimated Future Excess Returns for AIAL and CIAL, Per Annum

	Excess Returns ($)
AIAL	
Year 1	3,797,395
Year 2	5,402,391
Year 3	7,087,637
WIAL	0
CIAL Years 1-	3,849,568

10.71. Given the projections that prices increase and costs remain unchanged, it is not surprising to find that both allocative inefficiencies and excess returns increase compared to the situation for AIAL's and CIAL's June 2000 financial years.

10.72. The Commission notes that because its analysis of WIAL does not take account of any increases in prices that may result from WIAL's upcoming consultation, this could potentially influence its findings.

CONCLUSIONS

10.73. The purpose of this chapter has been to assess the performance of the three airports, with respect to their airfield activities, in order to lay the foundation for the answering of two key questions in later chapters: is price control of airfield activities necessary and desirable in the interests of acquirers? And should the Commission recommend to the Minister that price control be imposed? These questions are considered in chapters 13 and 14 respectively.

10.74. Three types of data were used in making the performance assessments. First, historical data were used to assess returns on airfield activities made by the airports since corporatisation. The actual annual returns were compared to estimates of normal or competitive returns based on the WACC being earned on an optimised

asset base. This found that although actual returns had fluctuated from year to year, on average over the relevant periods they had exceeded the competitive return for AIAL, and to a lesser extent for CIAL, but at WIAL were below the assessed competitive return. In other words, it would appear that both AIAL and CIAL had on average earned a return higher than they would have earned in a competitive market.

10.75. The second source of data was the average 2000 year prices and costs for airfield activities at each of the three airports. These data were used to calibrate various models which could be used to measure the impact of 2000 year prices and costs on the three dimensions of economic efficiency, together with wealth transfers. This found that because the 2000 year price exceeded the competitive price at AIAL, there was a noticeable level of allocative inefficiency, together with a more substantial wealth transfer from acquirers to the airport. In contrast, WIAL's competitive price was found to be above the 2000 year price. CIAL's competitive price was also found to be above the 2000 year price. In addition, while there is scope for productive inefficiency, the nature of airfield activities probably means that this is likely to be limited. Evidence on such inefficiency is currently lacking. However, there may be a greater scope for dynamic inefficiency stemming from poor investment decisions; the presence of optimised out assets uncovered earlier suggests that this is the case.

10.76. The third source of data used to assess performance were those relating to projected prices and costs. It was assumed for various reasons that unit costs would remain constant and that no unrealised capital gains or losses were anticipated at each of the airports. Hence, the recent price rise at AIAL, and its announced future rises, could lead to additional excess returns and allocative inefficiencies in the future. The recent price rise at CIAL would cause the price to rise from below the competitive level to above, resulting in excess returns and allocative inefficiencies at CIAL in the future. WIAL's competitive price fell compared to the year 2000, because of the assumption of no unrealised capital gains or losses were expected in the future. However, this was not enough to change the overall conclusion that WIAL have a price that is less than a competitive price.

10.77. The following comments are sought in connection with the analysis presented in this chapter:

- Is the Commission's assessment of the existence of, or potential for, excess returns correct?
- Is the Commission's assessment of the extent of, or potential for, allocative efficiency or inefficiency correct?
- Is the Commission's assessment of the extent of, or potential for, productive efficiency or inefficiency correct?
- Is the Commission's assessment of the extent of, or potential for, dynamic efficiency or inefficiency correct?
- To what extent are there other sources of detriment (e.g. spillover effects, service quality)?

11. AIRPORT REGULATION INTERNATIONALLY

INTRODUCTION

11.1. Chapter three of this report outlined the current regulatory environment governing airports in New Zealand, including international obligations. Internationally, airports tend to be subject to the same safety and security regulations as New Zealand airports. What varies markedly—and is of interest in this inquiry—is the economic regulation that controls airport pricing. This chapter of the report provides an overview of the economic regulation of selected airport internationally. It also outlines various issues with the different regimes and identifies lessons for New Zealand.

11.2. Traditionally, governments world-wide have owned and operated airports. This reflected the origins of airports as public sector utilities and their role as an essential part of a country's transport infrastructure. Today, governments are increasingly privatising airports. What is more, the development of new airports are typically being undertaken by private investors. Although many countries have changed, or are in the process of changing, the ownership structure of their airports, not all have changed the regulation governing those airports.

11.3. In Australia, privatised airports are subject to a price cap, while airports owned by the Federal Government are subject to prices surveillance. Some airports in the United Kingdom (UK), both publicly and privately owned, have been price controlled for more than ten years. Airports in the United States (US) to a large extent remain under public ownership and are not subject to any price caps, but have some constraints placed on them by the Federal Government. In Europe, charges at some airports are controlled, while others are uncontrolled. Other countries—for example, Canada and South Africa—have recently introduced, or are considering introducing, regulation of airport charges as airports are privatised.

11.4. Table 50 highlights the variation in the forms of economic regulation applying to airports internationally.

Table 50
Forms of Economic Regulation of Airports Internationally

Type of Regulation	Countries/ Airports
CPI-X Price Cap	United Kingdom (BAA London Airports and Manchester), Australia (privatised airports), South Africa, Vienna, Argentina, Mexico, Ireland, Belgium, Spain and Berlin.
Profit Control (Rate of Return Regulation)	Athens and Sweden.
Prices Surveillance	Sydney.
Voluntary (Government Influenced) Price Cap	BAA Scottish Airports, Sweden and Copenhagen.
Charges Set by Regulator Decision	Athens, Frankfurt, Italy and Portugal.
Charges Approved by Regulator	Amsterdam and Paris.
Pricing Guidelines and Policies Airport Decision	United States and Canada. New Zealand

UNITED KINGDOM

Introduction

11.5. Regulation in the UK is aimed at promoting the efficient, economic and profitable operation of airports, while furthering the interests of airport users and encouraging new investment.[146] There are effectively three 'degrees' of regulation:

- Airports with annual turnover in excess of £1 million per annum (termed qualifying airports) simply need permission to initially levy charges, but not to revise them.[147]

- A qualifying airport may have other discretionary conditions imposed on it where it is found to be unreasonably discriminating between users or unfairly exploiting its bargaining position.

- An airport may be designated and subject to more extensive regulation of airport charges, involving price caps and a requirement that the single till principle be used. The only designated airports at present are Heathrow, Gatwick, Stansted and Manchester.

Price Control Regime

11.6. Heathrow, Gatwick, Stansted and Manchester are subject to RPI-X price caps. The RPI-X regime is administered by the Economic Regulation Group of the Civil Aviation Authority (UK CAA) in conjunction with the Competition Commission (formerly the MMC and referred to as the MMC).

11.7. Under the Airports Act 1986 (the UK Airports Act), the UK CAA is required to modify the conditions on charges at the end of each five year period, but before doing so it has to refer the matter to the Competition Commission. The MMC conducts an inquiry and reports to the UK CAA, providing recommendations relating to airport charges and to public interest findings. Where the MMC finds that an airport has been acting against the public interest, the UK CAA has to impose conditions to address that finding and remedy the adverse effects identified. Following receipt of the MMC's report, the UK CAA holds its own inquiry before making its final decision.[148] The airports do not have any rights of appeal (only judicial review).

---

[146] Per the CAA's duties specified under legislation (UK Airports Act).

[147] Permission is given by the UK CAA and can only be refused if an airport fails to provide the CAA with the information it needs. Permissions remain in force unless they are revoked. As at 1 March 2000, 47 airports held a permission to levy airport charges.

[148] The role of the MMC in airport regulation has been under review for some time as it is inconsistent with practices for other regulated entities—where the MMC acts as the appeal body for the regulator's decisions. The work that the UK CAA and the MMC to some extent duplicate each other (and may make the regulation more costly). The MMC also has less detailed industry knowledge as it only gets involved every five years, while the UK CAA is the day-to-day regulator. However, the MCC continues to be involved and the latest five yearly review and is to be referred to the MMC in 2002.

11.8. Under the UK Airports Act, the UK CAA is required to perform its regulatory functions in a manner which it considers is best calculated:

- To further promote the reasonable interests of airport users.
- To promote the efficient, economic and profitable operation of the regulated airports.
- To encourage investment in new facilities at airports in time to satisfy anticipated demands of users.
- To impose the minimum restrictions that are consistent with its functions.
- To take account of the UK's international obligations.

11.9. The British Airports Authority (BAA Plc) was completely privatised and partly price controlled in July 1987. Although BAA owns several airports, only Heathrow, Gatwick and Stansted (its London airport companies) were designated to be price controlled.[149] In addition, Manchester Airport Plc (Manchester) was price controlled in 1988. Manchester is the biggest airport after BAA's London airports. Manchester is still publicly-owned and is the only public sector body in the UK subject to price regulation. The reviews by, and reports of, the UK CAA and MMC to date in respect of these airports are summarised in table 51:

Table 51
Reviews of Price Controls Applying to UK Airports

	MMC	UK CAA
Manchester Airport Plc	'MMC1' Dec 1997 recommended X for Q1 (1/4/88 to 31/3/93)	Decision in 1998 set X for Q1
	'MMC3' July 1992 reviewed Q1 and recommended X for Q2 (1/4/93 to 31/3/98)	Decision 'CAP 609' date? Set X for Q2
	'MMC5' August 1997 reviewed Q2 and recommended X for Q3 (1/4/98 to 31/3/03)	Decision 'CAP 679' Nov 1997 set X for Q3

	MMC	UK CAA
BAA Plc London Airport Companies	X for Q1 (1/4/87 to 31/3/92) set by UK Government	
	'MMC2' July 1991 reviewed Q1 and recommended X for Q2 (1/4/92 to 31/3/97)	Decision 'CAP599' Nov 1991 set X for Q2
	'MMC4' June 1996 reviewed Q2 and recommended X for Q3 (1/4/97 to 31/3/02)	Decision 'CAP664' Oct 1996 set X for Q3

Manchester Airport Plc

11.10. Manchester Airport is currently in its third quinquennium (Q3) of price control which covers the period 1 April 1998 to 31 March 2003. The last review of Manchester was conducted in 1997; reviewing the second quinquennium (Q2) and setting X for the third. The UK CAA decided to limit the increase in revenue yield per passenger from

[149] BAA's three Scottish airports—Glasgow, Edinburgh and Aberdeen—are informally capped. Under threat of designation, the UK Government has persuaded BAA to introduce a voluntary cap of RPI-3.

airport charges by RPI-5 for each year of the five year period (for Q3 the control had been RPI-3), and imposed conditions in relation to the MMC's public interest findings that Manchester had not been providing adequate information on the costs and revenues associated with the supply of utilities, and that its consultation procedures were inadequate. The UK CAA's decision largely followed the recommendations of the MMC, except that the MMC recommended RPI-6.6 for year one.

BAA Plc London Airport Companies

11.11. BAA is currently in its third quinquennium (Q3) of price control which covers the period 1 April 1997 to 31 March 2002 (although this has since been extended a further year). The last review of BAA was conducted in 1996; reviewing the second quinquennium (Q2) and setting X for the third. In the previous quinquennium (Q2) from 1 April 1992 to 31 March 1997, the price cap imposed by the UK CAA had limited the increase in revenue yield per passenger from airport charges at Heathrow and Gatwick individually, and at those two airports and Stansted taken together, to RPI-8 for the first two years, RPI-4 for the third year and RPI-1 for the last two years. The MMC noted that the charging formulae had reduced airport charges in Q2 by 20%, operating profit had been reasonably close to forecast, planned investment had been undertaken, and the quality of service had apparently not deteriorated.

11.12. In its proposals put out for consultation, the UK CAA followed the MMC's recommendations of RPI-3 for Q3, with an indicative formula of RPI+2 for Q4. However, it also put forward alternatives which generally involved much bigger negative Xs in Q3, and much bigger positive Xs in Q4, but were designed to give a rate of return of 7.5% (within the appropriate range from real, pre-tax rate, of 6.4 to 8.3%) over the ten year period (although not in each quinquennium). The positive Xs for Q4 reflect the projected opening of Heathrow's Terminal 5 in 2003/04 (the second year of Q4). A basic issue was to encourage the necessary investment to meet demand without overcharging, and with a smoothing of charges to prevent undesirable swings.

11.13. The UK CAA has already commenced work on reviews of the current quinquenniums for both Manchester and BAA, with a view to issuing its decision in the autumn of 2002. For the first time, the reviews are to be conducted in parallel. Unlike past reviews, the UK CAA is this time also undertaking a fundamental review of its approach towards the regulation of designated airports, and has signalled that the approach for the future may well differ from both that taken so far and that adopted in other regulated industries. Some of the main areas to be addressed include price caps, the setting of charges and the concepts of single versus dual tills. In addition, the review is looking at the possibility of introducing competition within airports.[150]

General Issues

11.14. There are a number of general issues and problems arising from the way in which airports are price capped in the UK, which can be summarised in the following points:

---

[150] UK Civil Aviation Authority, *The CAA Approach to Economic Regulation and Work Programme for the Airport Reviews*, Position Paper October 2000.

- *Investment* – There is a potential inconsistency between the five yearly review periods and the much longer payback periods required for many airport investments. Airports might not undertake investments necessary to expand capacity if they could not be assured of getting the required returns over successive review periods. In attempting to deal with this, the UK CAA holds annual 'mini reviews' to assess progress of investments and seeks to reduce regulatory risk by following a steady and consistent process.

- *Airport Congestion* – The RPI-X price cap potentially conflicts with the pricing needed to control congestion problems at the south-eastern airports. RPI-X drives down costs, and therefore prices, which may contribute (and certainly will not alleviate) congestion.

- *Single Till Approach* – The use of the single till approach has been questioned because of the potential for inefficient cross-subsidisation of airport activities.

- *Forecasting* – In forecasting airport costs and revenues, the regulated airports have an asymmetrical information advantage over the regulator that can potentially be exploited.

- *Meeting expectations* – There is a problem of maintaining ongoing price reductions to meet airline expectations raised by the previous trend towards lower prices, especially in the context of rising investment costs because of congestion in the south-east.

- *Nature of Controlled Price* – The 'prices' set under the UK airport price caps are the yields per passenger. They are based on the combined charges for aircraft landing (actually levied for takeoffs), passenger facilities and aircraft parking. A problem of making accurate forecasts (for costs, revenues, traffic volumes etc) over a five year period has emerged as a major issue in five year reviews.

- *Regulatory Costs* – The five yearly review process takes a year and is costly. The regulated airports have to pay the expenses of the UK CAA and the MMC. Designated airports pay the CAA 0.9 pence per arriving passenger, and other airports—with more than 0.5 million passengers per annum—pay 0.20 pence per arriving passenger. In addition, the airports meet the costs of any investigations by the MMC. Designated airports bear costs of up to 2% of their annual turnover and other airports up to 1%.

AUSTRALIA

Introduction

11.15. Australian airports are under a mix of public and private ownership. From 1988 to 1996 the Federal Airports Corporation (FAC) owned and operated most of the major airports in Australia. During 1997 and 1998, the Australian Federal Government abolished the FAC and privatised (by way of 99 year leases) all but five of the FAC airports. The remaining airports—the four Sydney basin airports and Essendon

(Melbourne)—were transferred to the Sydney Airports Corporation Limited (SACL). SACL is currently owned by the Federal Government.[151]

11.16. The major (and former FAC) airports—both publicly and privately owned—are currently subject to extensive economic regulation administered by the Australian Competition and Consumer Commission (ACCC). The regulatory framework is similar to that for privatised airports in the UK, except for the access arrangements and the fact that the price cap does not apply to the entire airport.

Australian Regime

11.17. The key objectives of Australia's regulatory regime are to promote the efficient and economic development and operation of airports, as well as the interests of airport users and the general community.[152] The regime comprises measures under federal law—the Airports Act 1996 (the Australian Airports Act), the Prices Surveillance Act 1983 (the Prices Surveillance Act) and the Trade Practices Act 1974 (the Trade Practices Act)—being the following:

- Price control, monitoring or surveillance.
- Access arrangements covering facilities that cannot be economically duplicated.
- Information disclosure.
- Quality of service monitoring.

11.18. The CPI-X regime has only been in place since 1997. The current regime was put in place for the first five years of the airport leases and will discontinue in 2002, unless the Federal Government decides that it should continue. At present, the Productivity Commission is reviewing the regime and is to report to the Federal Government as to whether there is a continuing need for prices regulation of airports, and the appropriate form of any prices regulation.

Price Control

11.19. From 1991 until 1997/98, aeronautical services[153] provided by the FAC in Australia—not provided under a lease, licence, or other contractual arrangement—were subject to prices surveillance pursuant to the Prices Surveillance Act.

11.20. As part of the privatisation process, the Federal Government put in place more detailed prices oversight arrangements, declaring price controls for certain airports

---

[151] Note that the Australian Federal Government intends to privatise SACL in the future.

[152] Department of Transport and Regional Development, *Pricing Policy Paper*, November 1996.

[153] In the simplest terms, aeronautical services are those facilities and services relating to the movement of passengers and freight by aircraft. The exact services included and excluded are specified by the Treasurer in the relevant declarations under the Prices Surveillance Act. Specifically excluded is aircraft refuelling and maintenance, freight buildings, check-in counters, and car parking.

pursuant to the Prices Surveillance Act. Currently, eleven core regulated airports[154] are subject to a CPI-X price capping regime in respect of aeronautical services. In addition, some aeronautical-related services not subject to a price cap, but where operators could exert significant market power, are subject to formal monitoring of costs and prices, the intention being that any price increases should not be excessive.

11.21. SACL is presently subject to a similar package of economic regulation, but not to price capping. Aeronautical services at Sydney's Kingsford Smith Airport are declared for price surveillance, with its price notifications being assessed by the ACCC taking account of the criteria in section 17 of the Prices Surveillance Act.[155] The ACCC has recently considered an aeronautical pricing proposal from SACL.[156]

11.22. There is scope for airport operators to obtain approval from the ACCC for relaxation of the cap to generate funds for *new and necessary* investment in aeronautical infrastructure. In the last two years, the ACCC has considered investment applications from most of the airports. In considering these applications, the ACCC has applied the following criteria:[157]

- The operator's plans for new investment or service innovation and the associated costs.
- The relationship between proposed increases in aeronautical charges and the costs (including the level of rate of return) of new investment or service.
- Support from airport users.
- Contribution of the investment or service to productivity improvements at the airport.
- Overall efficiency of the airport's operation.
- The particular demand management characteristics of individual airports.
- Airport performance against quality or service measures, and vis-à-vis other Australian and comparable international airports.
- The extent to which the proposed investment will facilitate the operations of new entrants.

---

[154] Namely the Phase I privatised airports (Melbourne, Brisbane and Perth), for which leases were granted in July 1997, and the Phase II privatised airports (Adelaide, Alice Springs, Canberra, Coolangatta, Darwin, Hobart, Launceston and Townsville), for which leases were granted in May 1998.

[155] Section 17 focuses on the need to maintain investment and employment; the need to discourage a person from taking advantage of market power in setting prices; and the need to discourage cost increases arising from increases in wages and changes in terms and conditions of employment.

[156] See Australian Competition and Consumer Commission, *SACL Aeronautical Pricing Proposal*, Final Decision, May 2001.

[157] The criteria are specified by the Treasurer in Direction 13.

Access Arrangements

11.23. An access regime aims to guarantee access to airport facilities by new airlines though:

- Providing the opportunity for airport operators to give an access undertaking to the ACCC for approval, that sets out the terms on which they will provide access to prospective users. The ACCC can accept undertakings where they comply with criteria given in section 44ZZA of the Trade Practices Act.

- Providing for airport services to be declared[158] under Part IIIA of the Trade Practices Act by either of two means:

- By the ACCC automatically declaring airport services (through section 192 of the Australian Airports Act), where it has previously accepted an access undertaking.[159]

- By an access seeker applying to the National Competition Council for a recommendation that the relevant Minister declares the airport services.

11.24. The Australian Airports Act does not list the services subject to declaration, but section 192(5) sets out the two declaration criteria for airport services. These are:

- Is the service necessary for the purposes of operating/maintaining civil aviation services at the airport? Relates to the essential nature of the service.

- Is the facility significant and uneconomic to duplicate? Relates to the concept of natural monopoly.

11.25. It has been left to the ACCC to decide what is an airport service. In a draft paper dated October 1998, the ACCC concluded that the following services were likely to fall within section 192(5) of the Australian Airports Act:

- Airside facilities such as runways and aprons.

- International passenger processing areas.

- Land for providing refuelling services.

- Land for providing ground service and freight handling equipment storage facilities.

- Land for providing light or emergency maintenance facilities.

- Landside vehicle facilities.

---

[158] Declaration gives current and prospective airport users the right to negotiate access with the airport operator, and if unsuccessful, to have the ACCC arbitrate the access dispute.

[159] ACCC (1998), *Economic Regulation of Airports – An Overview*, p 12.

11.26. In addition, three other services which satisfied the first criterion, but not necessarily the second, were distinguished as requiring treatment on a case-by-case basis, namely, domestic passenger processing areas, refuelling facilities, and ground service and freight handling equipment storage facilities.

11.27. The ACCC has to date received access undertakings from two airports—Melbourne and Perth—both of which it has declined to accept. The only determination to date under section 192 of the Airports Act involved Delta Car Rentals at Melbourne Airport, which concerned vehicle access to the land-side of the airport and the charges for access. In that case the road was declared as a service. The ACCC is currently considering a request for determination from Virgin Blue in respect of the common user domestic terminal at Melbourne Airport.

Information Disclosure

11.28. Part 7 of the Australian Airports Act requires airport-owning companies to provide to the ACCC separate, audited accounts covering only the airport, divided between aeronautical and non-aeronautical parts of the business. Cost allocation methodologies must be provided where both services use common assets. The specifics of the information disclosure regime has been prescribed by the ACCC, which publishes the information annually. Transparency is aimed at facilitating performance monitoring, compliance with regulations and leases, and pricing oversight.

Service Quality

11.29. Under Part 8 of the Australian Airports Act, the ACCC collects and evaluates information on quality of service at the major leased airports against certain objective and subjective performance indicators. This quality monitoring programme is seen as complementary to price regulation. The focus is on monitoring trends in service quality over time for each airport, rather than on inter-airport comparisons, and the results are returned to the airports for their comments.[160]

General Issues

11.30. There are a number of general issues and problems arising from the way in which airports are price capped in Australia. These are summarised briefly as follows:

- The price caps were based initially on the network prices[161] set by the FAC, rather than on the more appropriate airport-specific pricing.

- Being a weighted average, the formula allows individual real prices to fall by less than the cap, providing that others fall by more. Each price is itself an average through the year, and the weights are provided by each item's revenue share in the previous period. This latter feature allows the airport operators to set compliant

[160] It is noted that phase II airports are subject to less comprehensive quality monitoring.

[161] Geographically averaged prices within defined 'networks' of the FAC's airports.

prices, but it poses the problem of how to incorporate new charges for which the previous period revenue share is zero.

- It has not been completely clear as to what activities are in, and outside, the cap. Landside roads have recently been brought within the cap by the ACCC because they are considered to be essential to gain access to the terminal.

- Price capping only some activities has resulted in prices being introduced and/or increased on other uncapped activities. Not long after the CPI-X regime was introduced, both Brisbane and Perth Airports introduced fuel throughput levies (charges on easements and tank farms). The ACCC looked into the new charges and concluded that fuel levies should be in the cap.

- In considering investment proposals, issues have arisen in terms of whether the proposed investment is 'new' and 'necessary', whether the total costs are reasonable, and in determining the cost of capital.

- With the cap not applying to the entire airport, issues such as cost allocation have been important.

UNITED STATES

11.31. The Federal and State Governments in the US continue to own all major airports, with private involvement being limited to the management and operation of airports under contract. Regulation exists both at the national level and at the airport level. Economic regulation and policy is developed by the Federal Aviation Administration (FAA), an operating administration of the US Department of Transportation. The FAA's main role is in policy making, although, it can strongly influence airport operational activities.[162] The local airport authorities are de facto operators and regulators of airports.

11.32. The focus and scope of economic regulation in the US is limited to the setting of pricing principles for the levying of airport charges—there is no formal price control. Airport charges are negotiated directly between airports and airlines through airport-use agreements, and the FAA typically only gets involved in respect of disputes resolution as arbitrator, at which time it has the power to set aside prices that it considers excessive. The exception is in respect of passenger facility charges which require approval from the FAA. Aside from this, charges and pricing structures are established by airport owners subject to constraints imposed by law. The main price-based regulation is that landing fees must not discriminate against foreign-based or small airlines.

11.33. Federal law (the Airport and Airway Improvement Act 1982) requires that:

[162] However, the FAA's policy has required airports to produce financial statements and created a monitoring and compliance role for itself in respect of use of federal funds.

- Aeronautical charges be reasonable.[163] The Federal Government's current policy in respect of airport rates and charges is intended to reflect real-world practices and experiences. Airports must have reasonable rates and charges for their users. The policy is intended to encourage airport operators and airport users to negotiate rates that prevent either gouging or disruptions in service, and are tailored to the circumstances at the individual airport.

- All airport revenues are to be used for capital or operating costs. The airports are required to reinvest all revenues raised within the airport itself in order to become self-sustaining (rather than reliant on federal funds). In connection with this requirement, the Federal Authorisation Act 1994 requires that the FAA publish policies and procedures regarding the use of airport revenue.

- Airports be as self-sustaining as possible. A condition of receiving grants is that an airport's fee and rental structure facilitate this. This obligation generally requires that airports charge fair market value for the use of airport facilities, except for the airfield (see below).

11.34. The FAA's current policy requires that airfields be valued on the basis of, and charges for them be based on, historic costs—on the basis that the airports legally have no opportunity to use airfield land for anything other than an airport, so that it would be unreasonable for them to recover compensation through landing fees for a "lost opportunity" that did not lawfully exist. US airports are not allowed to revalue their airfield assets in the absence of modifications or improvements to those assets. The result is that the FAA's rules limit the return on investment that is able to be earned from airfield assets by only allowing the airports to recover costs incurred.

11.35. In recent years, the federal government has examined issues in relation to the sale or lease of its commercial airports. While several factors are motivating greater interest in privatisation, the Federal Government considers that legal and economic constraints currently impede any privatisation. The key impediment seems to be the FAA's policy in respect of airport revenues.

- In receiving federal grants, the current airport owners have given legal undertakings to not use airport revenues outside of the airport. The FAA considers that airport revenue includes any sale or lease proceeds that local and state governments may obtain from privatising their airports, and, therefore, that those governments are only entitled to recover their reimbursed capital and operating costs from such proceeds—the rest have to be invested in the airport. This removes any financial benefits associated with the sale or lease of an airport (any proceeds from sale would have to be invested in the airport).

- In addition, the FAA's current rules limiting the return on investment that is able to be earned from airfield assets would substantially limit the returns that any private-sector airport could earn. And as a privately-owned airport would not be eligible for a federal grant, there would seem to be little incentive for private-

[163] Aeronautical charges include, for example, landing charges, terminal arrival area fees, apron and tie down charges, fuel flowage fees, utility charges, and cargo and hangar rentals. Excluded are parking, rental cars, in-flight catering, office rentals, and concessions (non-aeronautical activities).

sector investors to want to purchase US airports—without a change in the FAA's stance.

11.36. FAA approval is required before a commercial airport can be sold or leased in the US. While the current stance of the FAA appears to be discouraging privatisation, the FAA has indicated that it may be more open and flexible on the conditions for the use of airport revenue if it determined that privatisation would not harm the public interest or undermine aviation policy. When, and if, privatisation occurs, it is likely that the Federal Government would regulate the landing fees charged by privatised airports because of concerns that monopoly pricing might occur.[164] There has been no indication as to what approach to regulation might be taken.

EUROPE

11.37. European airports are subject to regulation at three broad levels: regional (the European Union), national and local. While the European Commission (EC) has an increasing involvement in the aviation sector, no one body currently governs tariffs at Europe's airports. Economic regulation of Europe's airports is still dealt with by the individual countries with no consensus as to the type and form of regulation. As a result, the degree of regulation—and the tariffs governing airport charges—vary considerably across Europe.

11.38. The introduction of more uniform regulation of Europe's airports is thought to be some time off.[165] However, the EC has commenced a process of trying to establish a common legal framework for airport charges. The EC has introduced legislation to mitigate the market power of airports. Member states are required (by January 2002) to ensure non-discrimination, cost-relatedness, and transparency in setting airport fees.[166]

11.39. Only a small number of Europe's airports have been privatised. Vienna and Copenhagen were both privatised in the early to mid-1990s and floated on stock exchanges. Rome was similarly privatised and floated around 1998. Airports in Russia and Germany have also undergone some privatisation. Despite the lack of privatisation, the bulk of Europe's airports—whilst under public-ownership—are run as commercial undertakings, with the management and operation of airports often contracted out to the private sector.

11.40. The degree of regulatory intervention in the context of airport charges varies considerably. Some airports are free to propose their own charges subject to regulatory approval. Tariffs at other airports are subject to formulae linked to rates of inflation, anticipated traffic levels, and an appropriate return on capital employed. Table 52 summarises the price regulation that applies at selected European airports, along with their ownership:

---

[164] US General Accounting Office, *Airport Privatisation: Issues Related to the Sale or Lease of US Commercial Airports*, Report November 1996.

[165] ABN-AMRO European Airports Review, Spring 1998.

[166] Drabbe H, *EC Competition Policy in Relation to Airports*, April 1999.

Table 52
Economic Regulation of Selected European Airports

Airport(s)	Regulator	Mechanism	Ownership
Amsterdam	National government	Charges are approved by the national government, after considering airport recommendations.	Publicly owned and operated, but run as a commercial undertaking.
Athens	Greek Ministry of Transport	Filed by regulator. Rate of return regulated at 15%—profit control.	Publicly owned and operated.
Berlin	German Government	Temporary CPI-X for five years.	Publicly owned.
Copenhagen	Danish Ministry of Transport	Tariff increases are allowed in line with costs with continuous streamlining measures.[167]	Privately owned and operated.
Frankfurt	Air Transport Authorities	Take off and landing fees are regulated.	Publicly owned.
Milan	Italian Ministry of Transport	Regulator decision.	Publicly owned, but operation is contracted out to private sector.
Paris	French Government	Consultative committee which includes airlines.	Owned and operated by local government.
Portugal Airports	Government	Aeronautical charges set by Government,	Publicly owned by ANA.
Rome	Italian Ministry of Transport	Regulator decision.	Privately owned and operated.
Spanish Airports	Spanish Government	Charges are not allowed to rise faster than inflation and must be competitive.	Publicly owned and operated, but run as a commercial undertaking.
Swedish Airports	Sweden Civil Aviation Authority	Seek a long-term post-tax rate of return of 8% for entire airport.	Owned and operated by the state.
Vienna	Austrian Civil Aviation Authority	Charges are capped using CPI-X, considering traffic change according to a '7-11' formula.[168] Mandated single till.	Privately owned and operated.

CANADA

11.41. Until recently, all major Canadian airports were owned by the Federal Government through Transport Canada. Although, the setting of fees and charges was accomplished through federal regulation, there was no framework that clearly defined a role for the Federal Government in the operation of airports in Canada.

11.42. Canada's largest airport (and one of the thirty busiest in the world), Toronto, was privatised in late 1996, and since 1998, other local airports have also been privatised.

---

[167] The Danish government has announced an experimental lifting of the price cap for two years. Instead of a CPI-2, Copenhagen airport has accepted a voluntary restraint.

[168] Where traffic growth is negative or constant, charges are increased by the change in CPI—CPI-0. With growth of 0-7%, charges are increased by the change in CPI, but adjusted according to traffic growth. Charges are not adjusted where growth is 7-11%. Above 11%, charges are reduced. Reviewed every three years.

However, the Government has retained ownership of the 26 major airports that make up the National Airports System, which have been transferred from Transport Canada to new not-for-profit local airport authorities under long-term lease. The Federal Government has changed from being an airport owner and operator to that of merely owner. The new Canadian airport authorities exist for the general benefit of the public and the region in which they operate and are not-for-profit organisations. Their purpose is to manage, operate and develop airports in a safe, secure, efficient, cost effective, and financially viable manner with reasonable airport user charges and equitable access to all airlines.[169]

11.43. Coupled with the changes, Canada has developed a National Airports Policy which, for the first time, provides it with a comprehensive framework that clearly defines the Federal Government's role regarding airports. Legislation sets out the principles by which the airports can develop charges, but there is no prescribed formula. The main requirement is that charges be competitive and non-discriminatory. The airports have discretion to introduce charges within these constraints. There is no direct regulation of the prices charged by Canadian airports and no intention to introduce any.

SOUTH AFRICA

11.44. Airports in South Africa have, in recent years, been privatised. The Airports Company South Africa (ACSA) now owns and operates the former state airports, and is considered to be in a monopolistic and market dominant position. As a result, the South African Government has put in place a new sector-specific economic regime.

11.45. The South African Department of Transport's aim is to have airports which are safe, secure, effective and efficient; which meet the needs of civil aviation and of users at costs-related charges; and which are economically sustainable. Its policy specifically provides for the following in respect of charges (amongst other things):

- Fees based on the actual cost of service, as far as practicable.
- Fair and reasonable, and non-discriminatory, charges.

11.46. Initially, the South African system was modelled on the UK approach to airport price control—CPI-X price cap and a mandated single till. South Africa has since switched to a dual till approach.

11.47. Currently, the ACSA is subject to a CPI-X price cap for airport charges on a rolling-five year basis. The current permission to levy charges[170] stipulates the cap for each of the next five years (1 April 2001 to 31 March 2006) and is set so as to enable ACSA to achieve a 16% rate of return in 2005/2006. The 'X' for the each if the next five years are –7%, -6%, -6%, -0.7%, and 1.4%. The cap will be corrected annually for the previous year's performance (relative to the cap) and further adjusted if the

---

[169] Website of Lester B. Pearson Airport, Toronto: http://www.lbpia.toronto.on.ca/gtaa_splash.htm.

[170] Notice 155 of 2001, *The 2001/02-2005/06 Airports Company of South Africa Regulating Committee Permission to Levy Airport Charges*, South African Government Gazette, Vol. 427, No. 21980, 19 January 2001.

CPI is significantly different from expectations. The ACSA is also subject to minimum service standards.

ARGENTINA

11.48. Formerly operated by the air force, Argentina's major airports are now privately run. A sector-specific regulator has been established. Charges are subject to a CPI-X price cap that applies to all airport business (mandated single till). The cap is intended to be reviewed every 3 to 5 years. Service quality standards also exist.

MEXICO

11.49. The Mexican Government is leasing many of Mexico's airports to private sector firms. An independent regulator is to administer CPI-X price caps on aeronautical charges and set service quality standards. There is also a requirement that the airports consult with users. The aims of the economic regulation include preventing monopoly abuse and the promotion of efficiency. Reviews of the price caps are scheduled to occur five yearly where actual projections for traffic and capital investment materially deviate from forecasts.

IRELAND

11.50. The Irish Government's policy with respect to airports involves ensuring that Irish airports provide the necessary infrastructure and services at the lowest possible cost, consistent with safety requirements, whilst providing returns to airport shareholders.

11.51. Aer Rianta owns and operates the Dublin, Shannon and Cork Airports. At present prices for aeronautical services are based on a single-till approach and are approved by the Minister of Public Enterprises. However, a new regulatory framework is being proposed as Aer Rianta is to be privatised. An independent regulator (Commission for Aviation Regulation) is being established to regulate airport charges. Current recommendations are that a single-till RPI-X price cap will in the future only apply to Dublin. Shannon and Cork airports are considered to be subject to market forces and will set prices in response to demand and supply.

LESSONS FOR NEW ZEALAND

11.52. Two trends are seen internationally: a move by governments to relinquish ownership of airports (privatisation) and signs of a move by those regions with traditionally extensive regulation (for example, the UK) to question, and look to reduce, the extent of regulatory intervention. However, those countries that are privatising their airports are tending to put in place CPI-X price caps or other forms of industry-specific regulation (at least for an initial period).

11.53. The lessons that can be learned from airport regulation internationally fall into three groups:

- The rationale for regulating airports.
- The form of control.

- The effects of regulating airports.

11.54. However, given the differing circumstances that New Zealand finds itself in, the lessons on the form and effect of price control are more relevant to this inquiry than any lessons on the reasons for airports being controlled in the first place.

The Rationale for Regulating Airports

11.55. Airport ownership influences the extent to which an airport is regulated.

- Privatised (privately-owned) airports are generally more regulated than publicly-owned airports—New Zealand is an exception to this rule.

- Airports that are publicly-owned tend to be run as commercial undertakings and are required to be as self-sustaining as possible (not require funds from government). Many are also expected to provide a return to their government shareholders. The is the current situation with CIAL.

- Charges at US airports are based on direct negotiations between airports and airlines, subject to statutory requirements and rulings of the FAA. This is not too dissimilar to the current situation here, although there are more guidelines and constraints on pricing in the US. As with New Zealand, the US has experienced litigation as a result of disputes between airports and airlines over charges.

11.56. Price caps have initially been put in place in recognition that, left to themselves, markets can fail to provide an appropriate level of airport services and may result in excessive prices for airport services. For this reason, governments have wanted to ensure that consumer interests are adequately protected.

11.57. Decisions to regulate airports internationally tend to be made (and regulations put in place) when an airport is privatised and without experience of how the airport would behave as an unregulated privatised airport. Reviews that consider whether to continue to regulate a privatised airport (such as the reviews currently being conducted in Australia and the UK) are made on the same basis. In order to determine whether or not regulation is needed, the regulators or governments involved arguably have to predict how the privatised airport would behave without regulation—whether or not it would be likely to abuse its market power and monopoly price. The alternative is to decide to regulate simply on the basis that in the absence of regulation it might.

11.58. The situation is different in New Zealand. Price control is being considered having had ten years of experience of the operation of privatised airports, and of regulation in the form of consultation between airports and airlines—experience of an unregulated privatised airport. Rather than having to try to predict whether an airport might use its market power, the Commission is able to examine the current and historical behaviour of airports.

The Form of Control

11.59. Where airport charges are controlled, the form of control tends to be CPI-X type price caps.

11.60. Where CPI-X type price caps are used, the magnitude of X varies considerably between airports (both positive and negative) and across time for a single airport. Detailed analysis is undertaken to determine the appropriate X for an airport in any given year.

11.61. The length of time airports are subject to regulation also varies. Regular reviews (3-5 years) are conducted to reset price caps, but sometimes also to review whether the regulation continues to be necessary. In some countries (such as Australia), the regulation has only been put in place for a defined period (5 years) post-privatisation, after which it may cease if it is not needed. The Commission considers that regular reviews of the rationale for regulation (and the form of regulation) are important.

11.62. The activities of an airport that fall within the scope of regulation differ between countries. Some airports are regulated on the basis of a single till (for example, airports in the UK, Sweden, Austria, Ireland and Argentina) where the airports' entire activities are covered by the price cap. In contrast, only the aeronautical activities of airports in Australia, Mexico and South Africa are included in the price caps the apply to the regulated airports in those countries (a dual till approach is adopted). A problem with the latter approach is that it may not necessarily be clear as to which activities are inside and outside the cap. Another problem with only regulating part of an airport's activities is that the cap could be circumvented by the introduction or increase of charges outside the cap. An example of this can be seen in Australia where new charges for fuel throughput and taxis have been imposed by some airports.

11.63. There is the possibility that any airport activities not currently price-capped may become price-capped. Australia has prices surveillance in respect of aeronautical-related activities and an access regime that provides for declaration of services. Equally, there is the possibility that activities may be removed from price caps—for example, South Africa removed a number of services from ACSA's price cap when it moved away from a single till. The scope of the current inquiry restricts any recommendations of price control (at this time) to airfield activities.

11.64. An issue that always arises in regulating airports—and other industries—is how to overcome problems of asymmetric and limited information. Attempts by regulators to determine economically efficient prices may be undermined by the absence of sufficient information. A possible solution is benchmarking, but this has its own problems. The regulatory regime needs to recognise the asymmetric information problem and account for it. One means of doing this is through information disclosure requirements.

11.65. Indeed, where an airport's prices are regulated, there is often also an information disclosure regime. This suggests that the current Airport Authorities (Airport Companies Information Disclosure) Regulations 1999 (in its current form or a modified form) should continue if New Zealand airports are price controlled. The difference between the regimes that exist in Australia (for example) and New Zealand

is that in Australia the ACCC administers and publishes the information as part of annual regulatory reports, while New Zealand airports produce their own.

11.66. Many of the airports subject to price caps are also subject to quality of service monitoring. While necessary to ensure that airports do not sustain profits by reducing quality, such monitoring is difficult and time-consuming. One option is to attempt to have the airports formulate service level agreements directly with their customers. The level of service quality provided by New Zealand airports is dependent on the level of investment in facilities, so any monitoring could be coupled with consideration of the timing and size new investments.

11.67. The more complicated price caps that adjust annually based on actual inflation (relative to forecast) such as that applying to Vienna, may reduce regulatory risk and uncertainty between five yearly reviews of price caps. However, efficiency incentives are greatly reduced.

The Effects of Regulating Airports

11.68. Despite the fact that the CPI-X price caps were intended to involve more hands-off regulation with regulated entities provided with appropriate incentives, evidence suggests that it has tended towards cost-plus regulation. CPI-X regulation of airports has tended to be expensive and cumbersome (as evidenced by the UK and Australia). To some extent this is due to the difficulties that regulators have faced in finding appropriate benchmarks.

11.69. In considering applications from airports to increase charges, regulators have in some instances ended up making investment decisions on behalf of airport investors. While the appropriateness of new investments needs to be considered by the regulator, there needs to be sufficient certainty of approach so as to not discourage efficient necessary new investment. The criteria for new investment need to be clearly defined.

11.70. The intention has generally been that, over time (if not in the first instance), airport operators and their customers would negotiate directly and resolve prices, but in practice this has not occurred. The existence of a regulatory backstop has to some extent in Australia provided disincentives for airlines to negotiate directly with airports. The UK CAA—as part of its current review—has signalled a preference for more commercial negotiation.

11.71. In some jurisdictions, only selected airports have been price-capped. This has sent a signal to the other airports in those countries and, in some instances, resulted in voluntary price caps. One example is in the UK, where BAA has introduced a voluntary price cap for its Scottish airports. This has proved reasonably effective provided that there is a real threat that an unregulated airport would be regulated if it abused its market power.

11.72. Despite the issues with price caps, they have achieved reductions in airport charges. For example, in its last review of BAA, the MMC noted that the charging formulae had reduced airport charges over the previous five years by 20%, operating profit had been reasonably close to forecast, planned investment had been undertaken, and quality of service had apparently not deteriorated.

11.73. However, price caps can be problematic for congested airports (such as Heathrow) if they drive down prices to the extent that it further compounds congestion problems.

11.74. It is very hard to know what the impacts (positive and negative) are of any regulation. There is no real benchmark against which to measure the effects.

CONCLUSION

11.75. Different jurisdictions use different approaches to regulate airport charges depending on where they start from (for example, how airports are owned, what regulations already exist). There is no one approach—all involve trade-offs. The right approach depends on the specific problem(s) in the jurisdiction that is looking to be regulated.

11.76. Overseas regulation of airports does not provide a blueprint for regulation of New Zealand airports. New Zealand is considering price control having had ten years of experience of the operation of privatised airports, and of regulation in the form of consultation between airports and airlines—experience of an unregulated privatised airport. Having said this, the regulation of airports internationally does provide some lessons (as identified above) in respect of the form and costs of control. Issues surrounding the various approaches to control are considered further in the next chapter.

12. FORM OF CONTROL

INTRODUCTION

12.1. There are a variety of price control methods which could be used to correct the inefficiencies of monopolies. This chapter discusses the different approaches to price control and the merits of each. The Commission considers that the criteria against which the different approaches to price control should be evaluated are allocative efficiency; productive efficiency; dynamic efficiency; and regulatory burden and uncertainty.

12.2. Chapter 6 discussed what was meant by allocative, dynamic and productive efficiency. Using price control as a means to deal with any inefficiencies requires that the regulatory costs and uncertainties of each approach be considered. A brief overview of what is meant by the regulatory costs and uncertainties of price control is provided below, before the various approaches to price control are evaluated.

Regulatory Burden and Uncertainty

12.3. In introducing regulation, consideration must be given to the costs of the regulatory regime. The size of theses costs differs according to the price control approach used. They include:

- Compliance costs on the regulated firms, including those costs associated with interpreting the regulation (e.g., dispute resolution costs) and those costs associated with applying the regulation (e.g., the information supply costs imposed on the regulated firm). There is also the opportunity cost of management time diverted from seeking new business opportunities to involvement in the regulatory process.

- Costs of the regulatory body. To economise on regulatory costs, the process of regulation may be simplified (e.g., infrequent reviews, simpler price structures, a smaller range of services), but this in itself may create inefficiencies in the firm by inhibiting its ability to respond to changing market conditions.

- Costs associated with the possible corruption of the system through “regulatory capture” or “regulatory instability”. Uncertainty over the behaviour of the regulator can be damaging to incentives. For example, a problem of any investment decision in a regulated environment relates to “regulatory opportunism”, where regulators reverse previous policy commitments once regulated firms are committed to irreversible investments or other decisions. As a result, future investment will be discouraged. Regulators can reduce “noise” by explaining their intentions clearly, by reducing arbitrariness in decision making, and retaining discretion only where it can improve outcomes. For example, discretion could prevent “regulatory opportunism” by regulated firms who take advantage of the system in unintended ways.

APPROACHES TO PRICE CONTROL

12.4. Under the Commerce Act, the Commission is confined to authorising "all or any component of the prices, revenues or quality standards that apply in respect of the supply of controlled goods or services". Section 70 of the Commerce Act, however, appears to grant the Commission a very broad discretion to use whatever approach it considers appropriate in making such authorisations, and accordingly, control. Although, the Commission must have regard to the considerations prescribed in section 70A of the Commerce Act, namely, the extent to which competition is limited, the necessity or desirability of safeguarding the interests of acquirers or suppliers, and the promotion of efficiency in the production and supply of controlled goods or services. As part of an authorisation, the Commission could potentially establish pricing guidelines.

12.5. The Commission note that section 72 provides that supplier may voluntarily submit an undertaking to the Commission for approval as an alternative to the Commission making an authorisation under section 70.

12.6. There are four broad approaches to price control that the Commission could use in terms of granting authorisations. Each is described and evaluated in turn:

- A *cost of service* (or rate of return) approach in which price increases are not allowed unless they can be justified by cost increases which have depressed the enterprise's rate of return.

- A *price-cap* (or index-based) approach under which price is restrained by comparison with competitive prices elsewhere, or through a price capping scheme.

- A *sliding-scale* approach. A combination of the above approaches, with any excess profits being shared in a predetermined fashion.

- A negotiated price approach that would encourage commercial negotiation between suppliers and acquirers, based on pricing principles set by the regulator.

Cost of Service Regulation

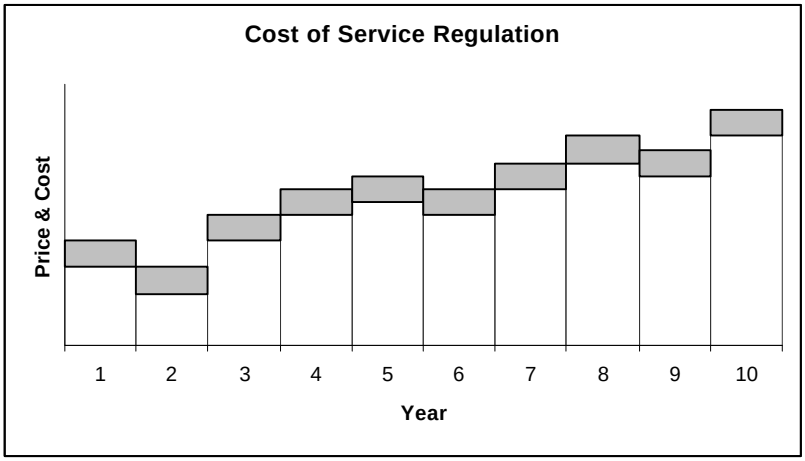
12.7. Cost of service regulation is the approach traditionally used in the US for utilities. A regulator will set prices so as to enable the regulated firm to earn sufficient revenue to recover reasonable costs in providing the service, including depreciation and an allowed return on capital. The allowed return is a reasonable target rate of return multiplied by the relevant asset base.

12.8. The structure of prices is determined within the total revenue requirement. It seeks to avoid unreasonable discrimination by regulating individual prices. Prices change at regular, or special, regulatory reviews.

12.9. Chart 6 below shows how the cost of service regulation would work over a 10 year period. The clear boxes represent the operating costs of the company and the shaded boxes its profits. Price is reviewed once a year by the regulator. Chart 6 shows that

when the company introduced costs savings measures, or its costs rose, price adjusted accordingly. The profits of the company remain roughly the same in each period.[171]

Chart 6



12.10. The distributional consequences of this approach are; If costs rise (fall), consumers will bear (benefit from) this change through higher (lower) prices, while the returns to the producer are unchanged (in both cases). The risk of cost rises (falls) has, therefore, been shifted from the producers to consumers. Any reduction in costs will benefit consumers, although producers have little incentives to reduce costs in the first instance.

12.11. Revaluation gains (losses) for assets will under this form of price control raise (lower) the profits to the company and the price charged in each period.

12.12. In practice the cost savings or rises described above will be subject to regulatory lag. The cost changes will affect the company's profits and the regulator will then, by setting adjusted prices, confiscate excess profits or compensate for lower profits.

Allocative Efficiency

12.13. This approach encourages allocative efficiency of output prices because prices track costs.

12.14. However, price setting requires detailed consideration of the appropriateness of those costs and their allocations between different activities. As is discussed below, this approach may encourage inappropriate investment or productive inefficiency, thus raising costs above the efficient level. The allocation of costs may also be able to be manipulated by managers. These issues may curtail some of the potential allocative efficiency benefits of this approach, if they can not be corrected.

[171] The areas may be slightly different in size if the return the airport can earn is set as a percentage of the cost base, because, as the base changes in size, so too do the profits. The Commission has assumed that the cost base has not changed so much as to make the areas not "roughly the same".

Productive Efficiency

12.15. Cost of service regulation arguably provides inferior incentives for firms to contain costs. This is partly because the normal justification for a price adjustment is that costs have increased, so that firms come to expect that any cost increases can be passed on through higher prices ("cost-plus" inefficiency); and partly because cost reductions tend to be reflected in lower prices, so firms have less incentive to engineer productivity improvements when they keep none of the benefit.

12.16. Inefficient cross-subsidisation can arise under this approach. Where the enterprise contains a mix of regulated and unregulated activities, it may have an incentive to include more of the costs in the regulated activity, where they can be covered by higher prices, leaving the unregulated activity with a lower cost base.

Dynamic Efficiency

12.17. It has been suggested that the cost of service approach could cause regulated firms to under-, or over-, invest. If the allowed rates of return are above the cost of capital, this could encourage firms to over-invest in order to increase the asset base, and hence profits. On the other hand, an overly tight allowed rate of return could have the opposite effect.

12.18. Moral hazards will be introduced if the firms perceive that the risk of poor investment decisions has been reduced and that they can simply seek a higher price at the next review to compensate for poor decisions.

Regulatory Burden and Uncertainty

12.19. Under this approach regulators need detailed information about the firm's operations to regulate effectively, but this information can be expensive (if not impossible) to acquire. Price setting requires extensive exchange and analysis of information.

12.20. Uncertainty emerges in this approach as a result of the amount of information analysed and how it may be interpreted. The allocation of common costs can also be arbitrary.[172]

12.21. The cost-based approach, because it tends to benefit flexibility of regulation at the expense of certainty of regulation, might be favoured for an industry characterised by rapid but irregular change.

Price Cap Regulation

12.22. A price cap sets a ceiling above which the regulated firm may not raise prices, although it retains flexibility in price setting up to that point. A price cap takes one of two forms:

---

[172] Baumol, Koehn, and Willig (1987), *How Arbitrary is 'Arbitrary'?—or , Toward the Deserved Demise of Full Cost Allocation*, Public Utilities Fortnightly, Vol. 120, September 3rd, pp 16-18.

- Revenue ceiling, where the firm has flexibility in setting prices providing the revenue ceiling is not exceeded. For example, in the UK, where regulated utilities provide multiple services, an aggregate cap is normally applied.

- Weighted average of specified prices (tariff basket), where price setting is flexible subject to the weighted average price not exceeding the cap.[173] The weights are provided by revenue shares from each service. This approach somewhat reduces the firm's discretion, compared to the revenue ceiling approach. It does, however, provide greater incentive to encourage demand than a revenue ceiling, where there is an incentive to moderate demand growth once the ceiling is set.

12.23. The price caps often include mechanisms for the adjustment of price (P) over time. The cap may take the following form (based on US practice):[174]

$$\Delta P = \Delta CPI - X \pm \Delta Z$$

where the allowed change in the firm's composite price (ΔP) is related to:

- Changes in the Consumer Price Index (ΔCPI, or to some other suitable index of regulated firm's costs such as the Producer Price Index).

- The firm's cost reduction relative to the economy-wide average, i.e., a relative productivity target (X).[175] The value of X would normally be set for a period of years ahead (e.g., generally 3-5 years in the UK) to give the firm and its customers relative certainty.

- Changes in the operating environment brought about by changes in government policy (e.g., changes in accounting rules, or in community service obligations) and other exogenous factors (e.g., prices for imported inputs, such as oil) which impact on costs. The permitted cost pass-through (Z) will be negotiated by the regulated firm with the regulator at the time of the particular event.[176]

12.24. Chart 8 below shows how price cap regulation would work over a 10 year period for a regulated firm providing a single service. The price cap is assumed to be reviewed

---

[173] Clearly if there is only one price in the basket, then this method by default, the price cap becomes that single specified price.

[174] Kaufmann and Lowry, *Updating Price Controls for Victoria's Power Distributors: Analysis and Options*, Madison, Wisconsin: Laurits R, Christensen Associates pp 16-19, 1997.

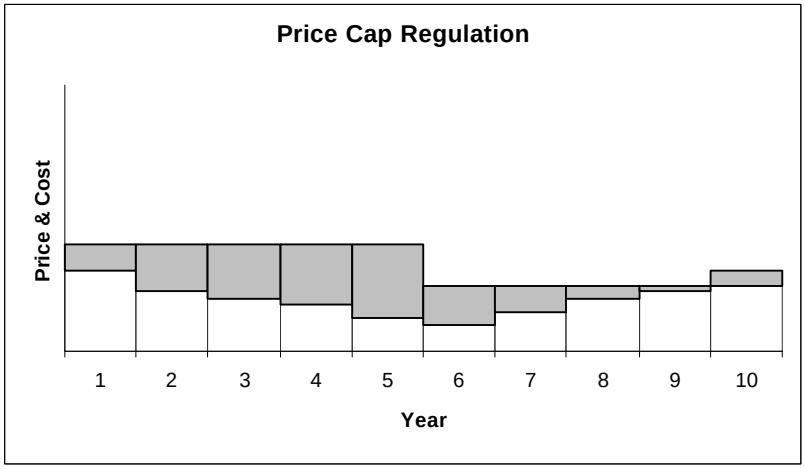
[175] It is important to recognise that, where the "X" is used only as a productive incentive (i.e., the X is not used to reduce monopoly profits or other inefficiencies), the X does not measure the firm's expected efficiency gains, but only the differential between that gain and the gain for the economy as a whole. The latter will be captured in the CPI, which reflects both input price changes and efficiency improvements. Thus, X will be a positive number where the rate of productivity improvement in the regulated firm is expected to exceed the economy-wide average, and a negative number in the reverse case.

[176] The potential for exogenous shocks will determine how frequently an adjustment to price may be necessary. If exogenous shocks are relatively frequent then the inclusion of an adjustment factor in the pricing formula will mean the price cap approach moves towards a cost of service approach. To prevent the two approaches becoming less distinguishable, it is likely that a limitation on those factors that may be considered exogenous will be required.

every 5 years. For simplicity CPI and X are assumed to be the same and Z to be zero. This means price does not change over each of the 5 year periods. Again the clear boxes represent the operating costs of the company and the shaded boxes its profits. Assume normal profits are earned in year 1.

12.25. Chart 7 shows that in the first 5 years, contrary to expectations, cost savings are made and the profits of the firm rise. In response to the rising profits it is assumed the regulator lowers the price cap at the 5 year review. If costs now begin to rise, profits fall. Profits are below their normal level in years 8 and 9, while in year 10 there is actually a loss.

Chart 7



12.26. The distributional consequences of this approach are as follows: If the price cap is set so that normal profits are expected to be earned, this may necessitate a price cap being set at a level lower than the current market price. This would result in an initial redistribution of wealth from producers to consumers (although this could be seen as only reversing a redistribution of wealth which had previously occurred as a result of monopoly power).

12.27. The setting of the price cap may aim for normal profits to be earned over time. In this way the price cap may be set at the current level with the intention that the X factor would reduce profits if cost savings could not be made by producers. In such circumstances, monopoly rents may continue to be earned for some time, but there would be a gradual redistribution of returns from producers to consumers. Regardless of whether producers made cost savings, consumers do receive a wealth gain reflected in the X factor and any initial reduction in price.

12.28. Revaluation gains (losses) for assets under this form of price control will not affect the profits to the company or the price charged during the period the cap is in force. Rather, revaluation gains (losses) will lower (raise) the return on assets expressed as a percentage.

12.29. In practice this approach may require some adjustments by the regulator for, say, inaccurate forecasts of price inflation or other significant market changes. If a Z factor is included then this has to be negotiated with the regulator. To stop price cap

regulation becoming effectively cost of service regulation the parameters of the Z factors should be made clear prior to the introduction of the price cap.

Allocative Efficiency

12.30. Setting the initial price will be important for allocative efficiency under price cap regulation. If the current price is used it may allow the company to continue to earn monopoly rents for some time into the future. It may be that a less than allocative efficient price is tolerable at the start, if the method adopted allows for adjustment to an allocative efficient price over time. An X in excess of any productivity gains possible would encourage a movement towards an allocative efficient price where excessive profits are earned. Kaufmann and Lowry argue a gradual adjustment mimics how, in a competitive market, excess profits are gradually eroded towards the long-run level by new entry and the capacity expansions of existing firms.[177]

12.31. A 'pure' form of price cap would set the initial price with regard to an efficient and comparable benchmark. It may be quite difficult in practice to find an efficient and comparable benchmark. Accordingly, in practice, internal cost factors have generally been used.

12.32. Under this approach the regulated firms are free to adjust individual prices within the price cap, allowing some price flexibility, which could improve allocative efficiency. This was considered important in the UK where substantial re-balancing of charges was anticipated when utilities were privatised. It was thought that firms may gravitate to Ramsey prices over time. In addition, the firms are not constrained in lowering price well below the cap if it would reward them to do so.

12.33. As price changes are set in relation to external factors, rather than the firm's own costs, there is potential for windfall gains or losses from unanticipated cost reductions or rises. The risk of losses may be mitigated by the presence of a Z factor.

12.34. If the CPI does not accurately reflect the inflationary pressures faced by the particular firm, and consistently either over-, or under-, estimates the inflationary pressure, then allocative efficiency will not be promoted. A separate inflationary index may have to be determined in such circumstances.[178]

12.35. Compared to the cost of service approach, price adjustments rely on external data, which is less sensitive to manipulation by the firm's managers, and potentially removes controversies over cost allocations.

---

[177] Kaufmann and Lowry (1997), op. cit. pp 16-19.

[178] In the US, use of the CPI in the price cap is common for telecommunications utilities, but two alternative measures of inflation of industry costs are also used. Firstly, an index may be specially constructed to measure inflation in the inputs used by a particular utility, as applies in the railroad industry. This is likely to be a better measure of input cost changes than the CPI, especially in the short-run. It could also reduce the number of exogenous factors that may require an adjustment of price. Secondly, an index of the prices charged by competing service providers may be used (sometimes called a "peer price" index), although it appears not to have been much used. In the United Kingdom (UK), the use of the retail price index (RPI) is standard.

12.36. If a revenue ceiling approach is used for price capping, subject to the supplier being able to set prices so as to collect this level of revenue, it may create an incentive to minimise output. In contrast, price capping using a tariff basket will, within the range of output where the price cap is above marginal costs, create an incentive to maximise output.

Productive Efficiency

12.37. The benefits to productive efficiency of price cap regulation include:

- Firms have an incentive to reduce costs by introducing productive improvements greater than that implied by the X target, since it retains 100% of any additional profits. At the same time, a failure to achieve improvements as great as X will lead to its profits being reduced.

- The added certainty stemming from less frequent interventions and rule changes improves performance incentives. Firms are assured of retaining any cost savings greater than implied by X at least until the next review.

12.38. The disadvantages to productive efficiency for price capping include:

- In some industries, it is claimed that the underlying rate of productivity improvement is low (e.g., tobacco), or that a high proportion of costs are fixed capital costs which are difficult to reduce. These circumstances lower the potential productivity benefits to be gained from price cap regulation.

- Theoretically, incentives only fully apply where a price cap is maintained for an indefinite period.[179] But over a period of years, the under- or over-performance of a regulated firm in terms of efficiency, together with possible changes in a range of other factors which affect the firm's performance, mean that the price cap periodically has to be reset. This resetting can cause incentive problems because it typically involves passing on to customers a proportion of any unanticipated cost savings (i.e., over-and-above those anticipated through the value of X in the cap) realised. To the extent that such sharing is expected, the prior incentive to reduce costs below the originally anticipated level will be impaired because the firm gets to keep only a proportion of the savings.[180] This would still be an improvement over cost of service regulation.

- If the price cap is not firm-specific, it could possibly advantage firms which have yet to introduce cost saving measures relative to those who have already done so.

---

[179] B Willamson, *Incentives and Commitment in RPI-X Regulation*, Topics No. 20, London: NERA, 1997.

[180] The trade-off facing regulators is not clear-cut: If too much of the saving is passed on to customers, they benefit initially, but lose out longer term through higher prices because of the discouragement to cost saving by the firm in the future. If too little is passed on, customers pay higher prices in the shorter term but gain the benefit of investment and cost saving by the firm in the future. The more frequent the review period and if cost savings passed on to consumers, the more closely the price capping approaches cost of service price regulation.

It would also have an uneven impact generally across widely differing firms.[181] For example, a price cap set to encourage cost-minimising behaviour by the least efficient firms might provide little incentive for the most efficient. Finally, an efficient firm may find it difficult to meet a high X requirement, but an inefficient firm could meet it relatively easily.[182]

- The financial viability of the enterprise may be effected by exogenous shocks, when adjustments through Z are not made. A right of appeal before the next review is due, may mitigate this risk. Alternatively, if firms find it relatively easy to get Z adjustments they will have less incentive to constrain costs. They may also expend significant resources trying to influence the regulator.

Dynamic Efficiency

12.39. It has been suggested that under-investment may occur with price caps. This possibility arises because the period between price reviews is often much shorter than the life of, and the payback period for, long-lived investments. Hence the regulated firm runs the "regulatory risk" that having committed itself to a major investment, the regulator may act opportunistically by cutting prices to allow consumers to usurp the sunk costs. There is a danger that in future reviews, prices may not be maintained at the level necessary to fund the interest and amortisation on the investment. The firm may then be discouraged from undertaking new investment in the future.[183]

12.40. The price cap may require a prescription of minimum standards for service quality. There will be an incentive for regulated firms to make cost savings through cuts in service quality. This may be done to increase (or prevent a fall in) profits, or it may be done to meet a large X factor requirement. If X is set relatively high it may over time cause prices to fall below long run marginal costs. In such circumstances, new investment will be discouraged and service quality may be compromised.

Regulatory Burden and Uncertainty

12.41. The operation of a price cap regime is seen as being relatively less burdensome than cost of service regulation. The frequency and scope of regulatory intervention is much reduced by the automatic adjustment mechanism built into the price cap, and the concept of the price cap is relatively simple. Hence, the costs of intervention and of compliance are likely to be less. Management effectiveness is also likely to improve as attention moves from the regulatory process to performing in the market.

---

[181] In Australia, discussions on extending price surveillance to price capping in oligopolistically-structured industries has raised this issue. Prices Surveillance Authority, *Discussion Paper on Price Capping: Design and Implementation Issues*, Discussion Paper No. 5, 1994, p 11-13.

[182] Two broad approaches could be used for determining X, namely, a Total Factor Productivity (TFP) approach based on historical data, or a benchmarking approach, which compares the current relative performances and prospects of different firms.

[183] In the UK, it is said that regulators look beyond the price review period in setting the value of X to take into account foreseeable investment needs. For example, in the case of water, X was given a negative value so as to allow for increasing real prices to provide funds for environmental improvements.

12.42. The credibility of the regulation depends upon the regulator choosing an appropriate value of X, and not being persuaded to change it in response to public or political pressure should profits turn out to be larger than expected. To do so would be to undermine the incentive property of the regime.[184] Similarly, if the price cap leads to the firm incurring losses, the government may be expected to step in if the financial viability of the firm becomes precarious.

12.43. The use of the CPI to account for inflationary changes may be a relatively simple figure to use in evaluating how the price cap adjusts overtime. However, the CPI may not always reflect the inflationary pressures faced by the particular firm. If a separate inflationary index needs to be prepared this is likely to increase regulatory burden and uncertainty.

12.44. The price cap can be detailed in its application. In the UK, a price cap review generally incorporates an examination of the cash flow requirements of the enterprise, including capital expenditure, for a substantial period ahead, possibly greater than the review interval, depending upon the firm's expenditure patterns and planning horizons, and on the durability of its capital. The regulator undertakes a critical review of proposed expenditure and revenue projections, including allowances for a reasonable rate of return, the dividend to be paid to shareholders, the impact of taxation, and the debt/equity structure.

12.45. Price cap approach tends to favour certainty of regulation at the expense of flexibility (at least for the periods between price reviews), and hence might be favoured for industries with lumpy investments and long investment payback periods.

Sliding Scale Regulation

12.46. Internationally, sliding scale regulation has been used in the past to control the prices charged by utilities. Under this form of regulation a table or a formula was used to link the price charged by a regulated company to the proportion of their net profit that it is allowed to retain. A company was free to charge whatever price it wanted. However, the lower the price it charged, the larger the proportion of its net profits it was allowed to retain.

12.47. Sliding scale regulation can be focused on various factors critical to the determination of whether excessive profits are earned and the price level. Dividend yield have been used overseas in the past as the target of sliding scale regulation. However, "to apply the strict sliding scale on dividend yields to present day utility regulation there would have to be specific accounting rules on retained profits and on the issue of bonus shares."[185] A dividend focus may also make pre-financing impossible, which may not be desirable.[186] A net profit approach is likely to suffer from a cost of capital distortion. As the value of the capital base changes, a net profit approach does not

---

[184] B Williamson, *Topics 20: Incentives and Commitment in RPI-X Regulation*, National Economic Research Associates, UK, 1997.

[185] Burns, Turvey, & Weyman-Jones, *General Properties of Sliding Scale Regulation*, Centre for the Study of Regulated Industries, Technical Paper 3, May 1995, p 8.

[186] Ivan Viehoff, *Topics 17:Evaluating RPI-X*, National Economic Research Associates, UK, 1995.

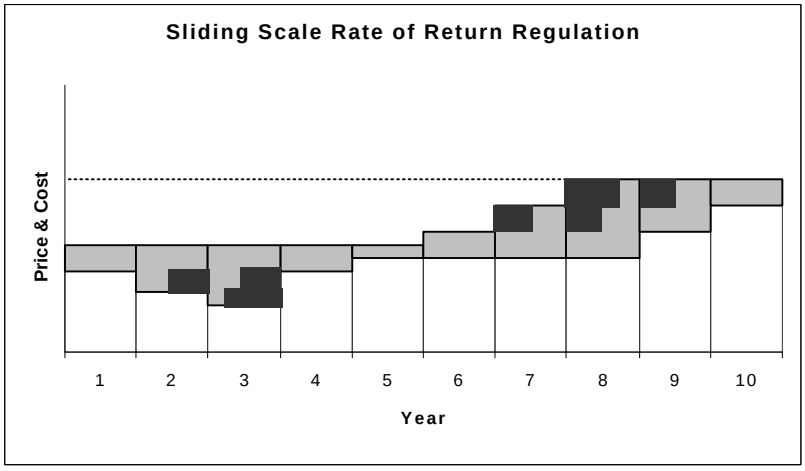
account for such changes. Mayer and Vickers also believe that "serious measurement problems" emerge in using net profits as a basis for price regulation.[187]

12.48. The Commission considers that sliding scale regulation based on rate of return is likely to be the most workable version of sliding scale regulation. Sliding scale rate of return regulation is, therefore, the focus for evaluating the approach here.

12.49. In theory, sliding scale rate of return regulation has adapted the sliding scale approach and combined a price cap with an allowed (or target) rate of return which a company can earn.[188] Generally, all profits can be retained when the rate of return is below the allowed level, but above that level profits have to be shared with consumers either by a direct rebate in the year in question or by future price reductions.

12.50. Chart 8 below shows how sliding scale rate of return regulation would work over a 10 year period. It is assumed that the price cap component is reviewed every 5 years, the allowed rate of return does not change (the asset base also does not change) and that there are two scales that may be invoked to calculate the amount of rebate which should be given to customers (50% of excess profits are shared with customers once the first scale is reached, 75% of additional excess profits are shared with customers once the second scale is reached). The blacked out boxes represent these rebates. Again the clear boxes represent the operating costs of the company and the shaded boxes its profits.

Chart 8



12.51. In year one the firm is earning its allowed return and is coincidentally charging up to the price cap. As cost savings are made the profits retained by the company rise but in a scaled fashion (i.e., years 2 and 3).[189] As costs rise again in years 4 and 5 profits are reduced by the constraint of the price cap.

---

[187] Mayer, C., and Vickers, J., *Profit-Sharing Regulation: An Economic Appraisal*, Fiscal Studies, 1996, Vol. 17, no. 1, pp 1-18.

[188] J., Acton & I., Vogelsang, *Symposium on Price-Cap Regulation: Introduction*, RAND Journal of Economics, 1989, Vol.20, No. 3, p 371.

[189] Please note that each column refers to the final outcome for the entire year. For example, the black box in year 2 of the chart should not be interpreted as forming half way through year 2. It is the total outcome for the year.

12.52. Assume now the price cap is raised at the 5 year review, say because of an expected increase in costs (which only slowly eventuates). In year 6 the company may raise price to earn its allowed return. If in years 7 and 8 its costs don't rise, but it continues to raise price up to the cap, it can earn extra profits, but again in a scaled fashion. If in years 9 and 10 costs rise again, as in years 4 and 5, its profits fall once again. In this illustration price has changed 4 times over a 10 year period and there are 5 years in which rebates are paid to customers.

12.53. The distributional consequences of this approach are as follows: Whether consumers receive an immediate wealth transfer will depend on the level at which the allowed rate of return is set, the scales introduced and the ultimate cap on price. If the ultimate cap on price is set lower than the current price, there will be some transfer of wealth from producers to consumers. Over time sliding scale regulation allows consumers to share in any excess returns and cost savings a monopoly may be able to generate. The allowed rate of return in sliding scale regulation can be though of as representing a minimum normal return. Any returns in excess of this minimum (whether through cost savings or raising price up to the cap) are then shared with consumers, producers retain part of the excess profits.

12.54. Revaluation gains (losses) on assets, under this price control approach, could have various effects. It will depend in the first instance on whether the allowed rate of return is fixed with regard to the initial value of the assets, or whether the allowed rate of return can vary, based on a fixed percentage of current asset values. In the second instance, the effects of revaluations will depend on whether the company is charging up to or within its cap. Without running through the possible scenarios, revaluation gains (losses) will have either no affect on profits or prices, or raise or lower profits and prices in a scaled fashion.

Allocative Efficiency

12.55. Under sliding scale rate of return regulation, the allowed rate of return is linked to the costs of the company, thus, encouraging allocative efficiency. Any movement away from the allocative efficiency price occurs at a scaled rate. As each new scale is reached the regulated company has less incentive to set (or leave) price well above what would be sufficient to cover costs and generate its allowed return. In other words, the rebates generated allow customers to share in any ability the company has to extract monopoly profits

12.56. The processing of rebates will raise the transparency of the potential for monopoly profits. This could improve the allocative efficiency of pricing over time as users and suppliers factor in their expected rebates into their decision making and discuss more openly the appropriate level of prices.

Productive Efficiency

12.57. Under sliding scale rate of return regulation the incentive for companies to make cost savings remains, although this incentive reduces the scales and when they kick in.

Dynamic Efficiency

12.58. Sliding scale rate of return regulation is linked to the capital base of the regulated firm, and, thus, encourages an optimal level of investment for the allowed rate of return. If the opportunity cost of capital exceeds the allowed rate of return, then assets will shift to other activities. If, on the other hand, the opportunity cost of capital is lower, this would encourage greater investment. This process would continue until the opportunity cost of capital rises to that of the allowed rate of return, subject to the firm still operating within the scales set by regulation.[190] This analysis is subject to the regulator choosing an appropriate rate of return. If it does not, this approach may introduce some of the dynamic inefficiencies of cost of service regulation, although there is more "give" in the levels of investment chosen, as there is more give in the returns which could be earned.

12.59. The incentive to reduce costs by lowering service quality remains, but this incentive reduces in a scaled fashion, until there is no benefit in the firm doing so. Similarly, the incentive to increase service quality remains subject to consumer demand, but the incentive reduces in a scaled fashion, until there is no benefit in the firm raising service quality further.

12.60. Sliding scale rate of return regulation lies somewhere between the other two approaches in terms of its likely affect on investment and service quality.

Regulatory Burden and Uncertainty

12.61. The automatic profit sharing rule under this approach means the regulator is less likely to take a backward looking approach to final outcomes and, therefore, less likely to claw back any excessive profits. What would be "excessive" has been predetermined.

12.62. It may be thought that sliding scale regulation would sit somewhere between the other two approaches in terms of regulatory burden. How much of a burden it is will depend on how it is applied. Burns et al note that even CPI – X regulation carries a significant burden and believe that "the relative burden of sliding scale compared to RPI-X may have been overstated."[191]

Pricing Negotiations with Principles set by the Commission

12.63. The Commission is interested in exploring forms of price control that lie between the current "light handed" approach, which is based on information disclosure by airports and the requirement for them to consult with major users, and the more "heavy handed" approaches which involve the Commission setting prices, allowable rates of

---

[190] In contrast, if a sliding scale approach were applied to net profit, for example, because it is not linked to the asset base, this introduces an incentive to minimise the asset base to generate the allowed net profits. Service quality is also likely to deteriorate as a result.

[191] Burns et al advocate sliding scale being applied to net profits so as to remove the need for the regulator to make an estimate of the capital base. However, as noted above, if the scale is not linked to the capital base then dynamic inefficiencies may emerge. Burns, Turvey, & Weyman-Jones, (May 1995), op. cit., p 3.

return or revenue caps. The aim would be to preserve as far as possible the "lightness" of the current approach, but seek to enhance what countervailing power the airlines may have by requiring the airports to provide additional information, and to negotiate with them over price within pre-determined bounds or principles set by the Commission.

12.64. This suggested approach might include the following elements:

- The Commission could require the airports to negotiate on price and service, rather than merely to consult.
- The Commission could specify a timeframe within which the negotiations should be completed and prices would be frozen until agreement is reached or the timeframe ends.
- To assist negotiations, the Commission could set bounds within which price negotiations should take place (issue guidelines on pricing principles). The regulator could require further information disclosure by airports for use in price negotiations.
- Prices emerging from agreements reached during commercial negotiations could be accepted by the Commission as an undertaking under section 72 of the Commerce Act (having the effect of an authorisation).
- In the event that parties could not agree within the timeframe, the Commission would authorise prices as it saw fit at the end of the negotiation period.

12.65. The bounds or guidelines for price negotiations would be set with the intention of allowing the airports a competitive or normal return on their assets. Given the uncertainty over the values of the various components used in the course of calculating that return—for example, the size of the asset base, the airport's operating costs, and the several elements that make up the weighted average cost of capital—the upper and lower bounds might be set using the likely ranges within which those values would fall. It may be envisaged that the resulting bounds would prevent an airport from earning an excessive rate of return. Prices would have to be non-discriminatory.

12.66. The price bounds might be set in the context of the maintenance of an agreed level of service. Provision would need to be made to accommodate necessary new investments undertaken by the airports, perhaps as under the present consultation regime.

12.67. What follows is an assessment of the possible costs and benefits of the pricing negotiation approach to price control. However, if agreement could not be reached through negotiation then the Commission would chose an alternative approach to price control at the end of the negotiation period. This alternative approach would have its own costs and benefits. For example, if agreement could not be reached, the Commission might chose the price cap regulation approach at the end of the negotiation phase.

Allocative Efficiency

12.68. The suggested approach could lead to an improvement in allocative efficiency, where airports currently are earning, or in the future could earn, excessive returns. The upper bound of the price range would prevent excessive returns being earned, and the enhanced negotiating ability of the airlines might further assist.

12.69. While allocative efficiency in aggregate could be improved, it is possible that those smaller airlines that lack bargaining power relative to the large airlines could be disadvantaged, for example, by having to pay excessively high landing charges. They may be forced to seek the intervention of the Commission in order to have their interests recognised. If the Commission as regulator becomes involved in a piecemeal fashion, this could have adverse implications for the overall allocative efficiency of pricing, and would increase regulatory costs.

12.70. Spill-over effects to related markets would not be considered in pricing negotiations. This is a feature of the present approach, and although it could reduce allocative efficiency, it may not do so relative to the present position, except insofar as the bargaining power of the large airlines relative to the small is increased.

Productive Efficiency

12.71. The maintenance or improvement of airport productive efficiency will depend upon the ability of the negotiating airlines to assess the appropriateness of the airport's costs. The airlines have the greatest incentive to monitor each airport's performance, and experience its performance on a day-to-day basis. This would be enhanced by a reduction in the information asymmetry between the parties, as could result from increased information disclosure. Even if agreement can be reached, it is still uncertain as to what extent productive efficiency would be promoted relative to the present situation.

Dynamic Efficiency

12.72. Airlines are well placed to know their likely future purchases of services, subject to inevitable uncertainties attaching to forecasting. Airports also have an incentive to seek such information for investment planning purposes. Price negotiation may therefore promote dynamic efficiency.

12.73. It may be difficult in price negotiations for some operators (particularly new entrants) to have their needs recognised. For example, future investment decisions may come to reflect the desires of the more powerful airlines, who may be in competition with other smaller airlines. Large airlines may wish to restrict landing slots as a means of reducing competition. Dynamic efficiency in the airport (and competition in downstream airline markets) would not then be promoted. However, this also appears to be a feature of the present approach.

Regulatory Burden and Uncertainty

12.74. The costs of the negotiated price approach would fall largely on the parties involved in the negotiations, as it does now. During the negotiation phase there may be significant uncertainty as to where each party stands in the negotiation and what the Commission's approach may be if agreement cannot be reached.

12.75. There is a risk that, even if agreements are reached, that the Commission may still decline to accept the agreed price as an undertaking. This might occur if the Commission believes that some of the costs and benefits to the public (i.e., the interests of the travelling public or smaller airlines) have been ignored in the negotiations between airports and its substantial customers. The Commission might feel uncomfortable accepting deals that differ in the relative outcomes between the parties. For example, if airports could agree a relatively better deal with AirNZ than what they agreed with Qantas. The Commission might be concerned that competitive neutrality in downstream markets might be affected.

12.76. The administration costs of the Commission are likely to be significant, as much of the work of determining an alternative method of price control would have to be done, given the risk that an agreement may not be reached between all parties. In addition, there are the costs of monitoring how negotiations are proceeding.

CONCLUSION

12.77. Table 53 below provides a summary of the likely merits of the different approaches to price control. The first three efficiency criteria are evaluated against the outcomes for a hypothetical (non-perfect-price-discriminating) monopolist, while regulatory burden and uncertainty are evaluated against the a no-price control environment. It is assumed that as close to an ideal form of each price control approach can be achieved in practice. An evaluation of the price negotiation approach is not presented in the table as it requires a comparison against the status quo. The status quo is evaluated in chapters 13 and 14.

Table 53
Merits of Different Approaches to Price Control

	Allocative Efficiency	**Productive Efficiency**	**Dynamic Efficiency**	**Regulatory Burden & Uncertainty**
Cost of Service	Encourages	No incentives created	Possible over-investment	High
Price Cap	Uncertain	Encourages	Possible congestion	Medium
Sliding Scale ROR	Encourages	Encourages	Neutral	Medium – High

12.78. It seems likely that sliding scale rate of return regulation and cost of service regulation, subject to the regulator being able to determine the appropriate costs for the service provided, are likely to encourage allocative efficiency. For price cap regulation the affect on allocative efficiency is uncertain. If the price cap is set at the

monopoly price then this will harm allocative efficiency, although the cap may be set lower or the approach may encourage a more allocatively efficient outcome over time.

12.79. Kaufmann and Lowry show that the cost of service and price cap regulation can be at the extreme ends of a range of price control approaches from a productive efficiency perspective.[192] Intermediate regulatory types, such as sliding scale rate of return regulation, are determined by the relative weights accorded to internal and external cost benchmarks. Accordingly, the Commission expects price cap regulation and sliding scale rate of return are most likely to encourage productive efficiency. Under cost of service regulation no incentives are created to encourage productive efficiency.

12.80. With regard to dynamic efficiency it seems likely that cost of service regulation has the potential to cause over-investment, while price caps may have an opposite effect and may lead to congestion. Sliding scale is likely to encourage outcomes somewhere between the other two approaches.

12.81. Price cap regulation is likely to give rise to the least regulatory burden and uncertainty (in terms of price). However, compared to the unregulated market situation, this burden will not be insignificant. Cost of service regulation is likely to place the greatest demands on regulated firms in terms of their time spent dealing with price control issues. Sliding scale rate of return regulation would be less burdensome and would introduce certainty between reviews in terms of the maximum price the company could set and how any excess profits are shared.

12.82. The redistribution effects of the various forms of price control will be sensitive to the initial values of the factors used to control price, set by the regulator. Any redistribution, however, should be seen as a consequence of aiming for an efficient outcome (not as a motivating factor in itself).

12.83. There is no consensus internationally on which approach to price control is the most appropriate. The relative importance of each of the above criteria will depend on the circumstances into which the approach may be introduced, i.e., a comparison with the status quo is necessary.

---

[192] Kaufmann and Lowry, *Updating Price Controls for Victoria's Power Distributors: Analysis and Options*, Madison, Wisconsin: Laurits R, Christensen Associates, 1997, pp 25-26.

13. IS CONTROL NECESSARY OR DESIRABLE IN THE INTERESTS OF ACQUIRERS?

INTRODUCTION

13.1. Section 52 of the Act sets out two requirements that must be established before the Minister may recommend that the Governor-General impose control. As noted in chapter 2, the Minister has required the Commission to report as to whether it considers that there is evidence that these two requirements are met. The Commission has already reached the preliminary conclusion in chapter 5 that airfield activities are supplied in markets in which "competition is limited or is likely to be lessened" (the requirement set out in section 52(a)). The second requirement (set out in section 52(b)), which is the focus of this chapter, is whether control is "necessary or desirable...in the interests of" acquirers.

13.2. However, as discussed in chapter 2, even if the Commission's report were to satisfy the Minister that there was evidence that both requirements under section 52 were met, the Minister nevertheless has an ultimate discretion as to whether to recommend that goods or services be controlled under the Commerce Act. In other words, even though satisfying the requirements under section 52 are a precondition for a recommendation of control, such a finding does not bind the Minister to recommending control.

13.3. The Commission proposes to approach the question as to whether control is "necessary or desirable...in the interests of" acquirers by measuring at each of the three airports the likely benefits of price control that would accrue to acquirers of airfield activities, balancing against those the likely costs of such control that would be borne by those same acquirers. Only then can it be determined whether the interests of acquirers would be met by price control.

13.4. The analysis of the interests of acquirers proceeds by the following steps. First, the appropriate counterfactual is considered. Secondly, the issue as to who are the relevant "acquirers" has to be determined. Thirdly, the benefits to acquirers have to be defined and measured. Information for this is drawn from the analysis and estimates made in chapter 10. Fourthly, the costs of price control that might fall upon acquirers have to be assessed. Finally, the benefits and costs as defined have to balanced for the airfield activities supplied by each of AIAL, WIAL and CIAL in order to find whether price control over any of them is "necessary or desirable...in the interests of" acquirers.

THE COUNTERFACTUAL

13.5. The benefits and costs to acquirers that would be likely to flow from the price control of airfield activities in the future have to be assessed against a counterfactual of what might otherwise happen in the future in the absence of price control. Thus, a comparison has to be made between two hypothetical future situations, one with price control and one without. The differences between these two scenarios can then be attributed to the impact of price control. In framing a suitable counterfactual, the Commission bases its view on a pragmatic and commercial assessment of what is

likely to occur in the absence of price control.[193] As with many business acquisitions, the most likely counterfactual may be a continuation of the status quo, with the airports operating under the present form of regulation that includes information disclosure and an implied a threat of price control.

13.6. However, if the present inquiry were to lead to the recommendation that price control should not be imposed, and that that was to be accepted by the Minister, the status quo might be affected. The constraining impact of the threat of price control could (at least for a time) be reduced. This might allow the airports a somewhat greater latitude in behaviour, leading to an increase in the inefficiencies or excess pricing associated with the non-price control scenario. Alternatively, that outcome could have the affect of providing a benchmark over which airports would not wish to pass, for fear of resurrecting the threat of price control.

13.7. A further consideration is that it is not possible to anticipate how other circumstances may change in the future. For example, modifications may be made to the Airport Authorities Act or the Airport Authorities (Airport Companies Information Disclosure) Regulations by the Ministry of Transport.

13.8. Taking account of all of these considerations, the Commission has decided to take as the counterfactual the continuation of the status quo, which includes an assumption that the current regulatory regime will remain, and will maintain its current level of effectiveness.

ACQUIRERS

13.9. In chapter 2, the Commission considered that "acquirers" of airfield activities included not only direct acquirers (aircraft operators) but also indirect acquirers (aircraft passengers and users of air freight services). It is noteworthy that section 52 provides no grounds for distinguishing between New Zealand and overseas acquirers, unlike the public benefit test in section 67, where "public" has been interpreted as meaning the public of New Zealand. This is an important consideration, given that the airfield activities at the three subject airports provide services to both domestic and overseas airlines, and to both domestic and foreign passengers. The Commission considers that it should treat all parties equally, so that the interests of overseas residents should be weighted equally with those of New Zealanders.

13.10. In any case, even if the focus were purely on benefits to New Zealand acquirers, there would be likely to be positive spill-over effects should price control have the effect of lowering landing charges at the three airports. Although the effects would extend much more widely, it seems likely that the same New Zealand acquirers could gain additional benefits indirectly through the stimulus to the economy arising from greater numbers of tourists, and possibly the greater number of flights and destinations encouraged by the greater demand for air services. However, because of their diffuse nature, the Commission does no more than note such spill-over effects here. They are considered again in chapter 14.

---

[193] See the discussion in Commerce Commission, *Decision No. 277: New Zealand Electricity Market*, 30 January 1996, especially p 16.

13.11. The Commission believes that it is not necessary to determine the relative shares of net benefits (if any) received by direct acquirers, such as airlines, and indirect acquirers such as passengers. Such an analysis, if conducted, would require detailed consideration of the 'pass through' of lower airline costs in the form of reduced ticket prices, which in turn would require an assessment of the state of competition in the air travel markets. This would expand the analysis beyond what is required to determine whether there are net benefits of price control to acquirers.

BENEFITS OF CONTROL

13.12. Acquirers could only be said to benefit from the price control of airfield activities if they as a group were made better off, relative to their position in the counterfactual, after allowing for any off-setting costs that they would bear as a result of price control being introduced. To make this assessment, it is necessary to draw upon the findings in chapter 10 as to the losses in the various dimensions of efficiency manifested in the counterfactual. However, for two reasons, those findings have to be used in a selective way to determine the potential benefits of control for acquirers. First, the focus is on the welfare of the acquirers of the airfield activities, and ignores the interests of the suppliers. Consequently, transfers of wealth between those parties become very relevant, even though such transfers are treated as mutually off-setting and therefore of no concern from an efficiency perspective.

13.13. The second qualification to the use of the findings in chapter 10 is that it cannot be assumed that *all* of the potential benefits to acquirers that would emerge from the elimination of any inefficiencies and transfers present in the counterfactual would actually be realised in practice. Like all forms of economic regulation, price control even of the most enlightened kind is very much a second-best solution to remedy outcomes in markets suffering from lessened competition. Price control will also create its own inefficiencies and costs, and the impact of these on acquirers has to be considered.

13.14. Despite these two qualifications, a useful starting point for the analysis of how acquirers of the services of airfield activities might benefit from the imposition of price control remains the inefficiencies that may be present in the counterfactual. Those inefficiencies were identified as being allocative, productive and dynamic. From these, it may be inferred that the sources of potential benefit may include the following:

- Excess returns (if present) would be reduced or eliminated by price control, through lower prices being set, which would lead to a transfer of wealth to acquirers.

- Lower prices would reduce or eliminate allocative inefficiency, further enhancing the benefit to acquirers. There may also be indirect or spill-over benefits from lower prices.

- Productive inefficiency (if present) would be reduced or eliminated by price control, with the resulting cost savings likely to be passed on in still lower prices, to the benefit of acquirers.

- Dynamic inefficiency (if present) would be reduced or eliminated by price control, with the resulting lower required revenue from landing charges (to cover costs) likely to lead to still lower prices, to the benefit of acquirers.

13.15. These are now discussed and quantified below.

Allocative Efficiency Gains and Wealth Transfers

13.16. In chapter 10, the Commission estimated the current and future allocative inefficiencies and excess returns of the airfield activities supplied by AIAL, WIAL and CIAL. In some instances, the airports' actual returns on airfield activities were found to exceed WACC, implying that prices were above the competitive level. From this, the potential benefits to acquirers can be estimated, if price control were to have the effect of reducing price at each airport to the competitive level. The benefit would be the gain in consumers surplus from the lower prices, which would equal the present allocative inefficiencies falling on acquirers plus the excess returns. Because of the focus on benefit to acquirers, the gain in the producer surplus element of allocative efficiency stemming from the lower prices is not relevant.

13.17. The relevant gains to acquirers as defined, in annual terms for specific years at the three airports, are given in table 54. In chapter 10, no excess returns or allocative inefficiencies were found at WIAL using the historical evidence. However, for the 2000 year, there does appear to be some excess returns and allocative inefficiencies. These could persist into the future. There is no evidence of excess returns or allocative inefficiencies at CIAL for the year to 30 June 2000. However, given recent price rises, there are excess returns and allocative inefficiencies. The table includes estimates of the effects of recent price rises at AIAL and CIAL and, in the case of AIAL, its announced future price rises.

Table 54
Potential Benefit to Acquirers from the Elimination of Allocative Inefficiencies and Excess Return for Specified Years, Per Annum

	Potential Benefits ($)
AIAL	
2000	1,284,609
Year 1	3,813,196
Year 2	5,432,850
Year 3	7,137,567
WIAL	0
CIAL	
2000	0
Years 1-3	3,893,881

13.18. Note that the estimates in table 54 assume that all potential benefits to acquirers are realised through the hypothetical imposition of price control on airfield activities at each airport. However, given the imperfect nature of price control, this is likely to be optimistic, as noted above. It may be more appropriate, for example, to set a range by, say, halving the potential benefit figures to generate a lower bound estimate, although clearly different forms of price control may be more or less effective.

Productive Efficiency Gains

13.19. Chapter 10 suggested that there may be some room for improvement in productive efficiency at each of the three airports. The model used in chart 5 showed that if productive inefficiency in the counterfactual were found in the fixed costs (which make up the bulk of the costs of airfield activities), and if those inefficiencies were to be eliminated under price control through the pressure of lower prices forcing greater efficiency, this would allow a further reduction in prices beyond what has just been described above.

13.20. The difficulty lies in actually estimating the extent of productive inefficiency (if any) in practice. In chapter 10, an attempt was made to get a feel as to how significant those inefficiencies might be by assuming that they amounted to 1% of the relevant operating costs. Their elimination by price control would then give rise to the potential benefits for acquirers at each of the airports presented in table 55. These are calculated by assuming that the average cost (AC) curve in chart 5 falls by 1% and translating this into a price effect by assuming that the competitive price (P_C) falls to the point where the new AC curve intersects with the demand curve.

13.21. The resulting benefit to acquirers exceeds the cost saving for two reasons: first, because the AC' curve is downward sloping, the output expansion and price reduction are greater than would apply with a horizontal cost curve; and secondly, because the gain in allocative efficiency of this additional price fall has to be added to the transfer effect from the lower price. However, without a precise measure of the slope of the AC' curve, it is not possible to calculate this additional allocative efficiency effect (or those proportions that reflect consumer, and producer, surplus gains respectively). It has been assumed, conservatively, that the benefit only equals the productive efficiency gain.

Table 55
Potential Benefit to Acquirers if Productive Efficiency were Improved by 1%, Per Annum

	Potential Benefits ($)
AIAL	131,910
WIAL	45,630
CIAL	60,660

13.22. It should be emphasised that the figures given in table 55 are only hypothetical ones. The Commission has no evidence that productive inefficiency exists, and if they do, how significant they might be. However, the figures in table 55 suggest that they are likely to be small compared to some of the other effects.

Dynamic Efficiency Gains

13.23. As noted earlier, dynamic efficiency relates to investment and to the quantity and quality of assets used by an entity. In airfield activities, such inefficiencies are most likely to arise where investment has led to too many assets being acquired—meaning that some assets are not "used or useful" in meeting demand—rather than because some assets are overly lavish for the purpose (such assets are said to be "gold

plated"). In chapter 10, dynamic inefficiencies were evaluated in terms of the effect such 'surplus' assets would have on inflating the cost structure of an airport.

13.24. Here the focus is on the benefits that acquirers of airfield activities would realise from the imposition of price control. Acquirers could benefit from lower prices if dynamic inefficiencies are removed. The level of these estimated annual gains to acquirers, by airport, are presented in table 56. As these gains stem from a reduction in costs, similar qualifications to those given above in the case of productive efficiencies also apply here.

Table 56
Potential Benefit to Acquirers from the Elimination of Dynamic Inefficiency, Per Annum

	Potential Benefits ($)
AIAL	6,711,684
WIAL	0
CIAL	49,218

Summary of Benefits

13.25. The foregoing assessment of the potential annual benefits to acquirers of the airfield activities supplied by AIAL, WIAL and CIAL from the imposition of control are summarised in table 57. The allocative efficiencies and transfers per annum for AIAL are based on an average of the 4 years worth of results shown above. The figures for CIAL are based on the first years results after the price rises. WIAL figures are based on their results for 2000.

Table 57
Summary of Potential Benefits to Acquirers from Price Control, Per Annum

	Allocative Efficiency and Transfers ($)	Productive Efficiency Benefits ($)	Dynamic Efficiency Benefits ($)	Total Potential Benefits ($)
AIAL	4,417,055	131,910	6,711,684	11,260,649
WIAL	0	45,630	0	45,630
CIAL	3,893,881	60,660	49,218	4,003,759

13.26. Table 57 indicates that the total potential benefits to acquirers of price control are relatively large in the case of AIAL, and are much smaller at WIAL and CIAL. This in part reflects the fact that AIAL is a much larger business, as well as that its prices have exceeded the competitive levels by larger margins.

13.27. However, these benefits have to be viewed with two caveats in mind. First, it has been assumed for the sake of simplicity that all benefits can actually be realised in practice. Secondly, the costs to acquirers arising from the imposition of price control have to be netted out. These issues are now considered.

COSTS OF CONTROL

13.28. As noted above, price control provides an imperfect substitute for competition for dealing with the inefficiencies and excessive returns in markets. It, therefore, cannot

be relied upon to eliminate the entirety of any inefficiencies and transfer effects found to be present in airfield activities at the three airports. In addition, price control introduces costs and inefficiencies of its own.

13.29. In general, the costs of control comprise direct and indirect costs. The direct costs include the costs falling on the parties, namely the compliance costs of the regulated entity (e.g., the cost of staff, the information supply costs, the diversion of time of senior executives), the costs incurred by other parties, and the administrative costs of the regulatory body. The indirect costs are the inefficient forms of behaviour stimulated by control, including the following: the distortions to behaviour caused by the potential for poor regulatory decisions (in terms of productive and dynamic inefficiencies); the scope given for opportunistic behaviour; and the potential for regulatory capture. Moreover, all of these costs have to be viewed in a dynamic setting. There is a potential for costs to increase over time if there is a succession of poor decisions, or to decline as the parties involved become more familiar with the regime. Costs will also be dependant on how enlightened, transparent and consistent are the regime and the actions of the regulator. Given the lack of recent experience of price control in New Zealand, the indirect costs of such a regime are particularly difficult to estimate.

13.30. Moreover, in evaluating the costs of price control, it has to be recognised that there are significant control costs in the counterfactual arising from the present regulatory regime. These costs include the costs of the airlines and airports—legal, management, administration, and other—during consultation; the costs incurred by airports in meeting the Airport Authorities (Airport Companies Information Disclosure) Regulations; and by airlines in monitoring that information. These costs would also include legal actions between the parties; there have been three court cases initiated against WIAL, and one initiated against AIAL. The costs also include those incurred by the Ministry of Transport in developing the current disclosure regulations.

13.31. For the purposes of the present inquiry, it is the additional costs that would be imposed by price control over and above those currently incurred that are relevant. A number of regulatory costs are already incurred by participants in the aircraft movement market, and these might not increase (or perhaps could decrease) if the present regime were to be replaced by one of price control. For example, the additional costs of addressing service quality issues under a price control regime may be minimal given the current disclosure requirements regarding service quality, under which such information has to already be gathered. Further, the airlines might have less incentive to monitor airport behaviour if the regulatory body were performing such functions.

13.32. In assessing the potential benefit to those who acquire airfield activities, the costs of price control that fall upon those acquirers must be netted off from the benefits assessed above. It is the net benefits of price control to acquirers that is relevant under section 52(b) of the Commerce Act, and that is the focus in this chapter (rather than the broader efficiency audit that is the subject of chapter 14). Hence, the concern is only with those costs of control that may be borne directly or indirectly by acquirers. This in turn depends upon who pays the direct costs of the control regime, and on the nature of the regime itself.

13.33. On the first issue, acquirers may pay the costs of the regulatory body directly through levies on passenger tickets, or indirectly by reductions in service quality, or in higher charges, if the airports incurs the costs. Alternatively, costs may be avoided by acquirers if, for example, the costs of the regulatory body were to be funded from general taxation, or airports were to be charged, but were prevented from passing these costs through to acquirers. These aspects of a possible future price control regime are difficult to predict. However, it seems a reasonable assumption that the costs of the various parties would be met by those parties from their own revenues, and hence would fall at least indirectly on acquirers from the prices set. Further, it is possible that the costs of the regulatory body would be recovered by a levy on the regulated entity, in light of the provisions contained in the regulatory regimes in electricity and telecommunications, in which case acquirers would indirectly bear that cost, too.

13.34. On the second issue, the Commission believes that the costs of price control can only be assessed when the nature of that control is specified. However, the Commission does not wish to prejudge the form that price control might take, in the event that it were to be introduced. Consequently, it has chosen to examine the costs using two diverse forms of price control representing 'heavier' and 'lighter' forms of regulation, namely price cap regulation and what it refers to as price negotiation, respectively. The costs associated with each are now considered in turn.

Price Cap Regulation

13.35. The features of a price-cap regime, and the generic costs and benefits associated with it, were considered in chapter 12. Prices are usually set for a period of three to five years ahead, those prices generally incorporating compensation for inflation and any exogenous cost increases ("cost pass-throughs"), less anticipated reductions in costs greater than the expected economy-wide average.

Direct Costs

13.36. The direct (or compliance) costs of price cap regulation occur largely at the times of the periodic price reviews and price-resettings, when they may be substantial. At other times the regulatory body has a largely monitoring role, while the regulated entity must ensure that compliance is maintained. Users may also engage in monitoring activity.

13.37. The Commission has received one independent estimate that the costs of administering price control for one airport might be about $500,000 per review. In addition, it might be expected that the airport in question and the airlines would each incur at least similar, and probably rather larger, sums during the course of participating in the review. On the current inquiry the Commission has spent over $1 million in producing this draft report, and it understands that each of the airports have spent similar sums. On top of the review period expenditures, there would be ongoing monitoring and administration costs by all parties in the non-review years.[194] On the

[194] It is understood that the cost of MMC in undertaking the last review of the three London airports of the British Airports Authority (BAA) was about £800,000, and that BAA incurred costs on its own behalf of about £0.5 million per year in non-review years, and about £2 million plus the absorption of

basis of these considerations, a very rough estimate is that the direct costs of price controlling a single airport might be $2.5-$5.0 million in a review year, and $1.0-$2.0 million in other years.

13.38. However, from the perspective of acquirers, the relevant costs are the additional costs that they would bear compared to the status quo. In broad terms, the costs of a price-cap regime relative to the counterfactual depend upon the relative frequencies and costs of the price reviews under both forms of control. In addition, price control would involve a regulatory body, whereas the present regime does not. In terms of information provision, the current disclosure requirements suggest that the costs of providing information may not differ materially between the two. In 1994, Air New Zealand estimated that the regulation of airports in New Zealand over the preceding four years may have cost in order of $10 million to administer, or $2.5 million per annum.[195] All this suggests that price-capping would be likely to entail some extra costs, particularly those of the regulatory body. Much of these costs would be likely to fall on acquirers, although in total they appear unlikely to be large relative to the size of the prospective benefits.

Indirect Costs

13.39. The indirect costs associated with regulation are difficult to quantify in the abstract, but they are likely to prevent the full attainment of potential efficiency gains. Similarly, there are likely to be trade-offs between the different dimensions of efficiency, resulting in the imperfect attainment of one being needed to further the achievement of another. For example, a regime which immediately 'clawed back' through price reductions any cost savings made by the regulated entity would eliminate incentives for it to continue to improve productive efficiency. The entity would need to retain some efficiency gains in the form of higher profits in order to preserve incentives to seek out ways of becoming more efficient in the future, even though this would result in excess returns and allocative inefficiency.

13.40. Both of these considerations—price control being a blunt instrument, and the trade-off issue—suggest that the indirect costs of price-cap regulation can, in principle, be modelled by scaling down the size of the benefits likely to be realised. However, this can be done, at best, only on a fairly arbitrary basis. One attempt to estimate the optimal 'sharing' of extra profits realised by the controlled firm between the firm and its customers found that a 50:50 split was best, implying that significant excess profits would be necessary to maintain incentives for the firm to improve productive efficiency.[196]

13.41. Other trade-offs between dimensions of performance and efficiency can also be mentioned. First, over-zealous enforcement of price cap regulation may reduce the incentive for regulated entities to invest or compromise on service quality. If new investment is not undertaken when necessary, capacity may be insufficient to meet

---

senior management time in the five yearly review year. Of course, BAA is very much larger than any of the New Zealand airport companies. In addition, there were the costs of the UK CAA.

[195] Quoted in Price Surveillance Authority, *Regulation of Airport Pricing-Is the New Zealand Approach Applicable to Australia?*, Discussion Paper No. 8, May 1995, p 24..

[196] B Williamson, *Incentives and Commitment in RPI-X Regulation*, NERA Topics, 20, 1997.

demand, and a drop in service quality may result. To deal with this issue, separate service quality standards may have to be developed, which would raise the administrative costs of the regime. This is most likely to occur if the current disclosure requirements were to prove to be inadequate in protecting service quality.

13.42. Secondly, productive inefficiencies are likely to be reduced under price-cap regulation. The X factor is usually set with the intention of encouraging productive efficiency. However, if the cost pass-through provisions are too generous, or too much attention is paid by the regulator to setting prices in relation to costs, efficiency incentives are likely to be impaired as cost increases may be used to justify price increases.

13.43. Thirdly, price-cap regulation provides some certainty as to how prices will change between review periods, but there may be significant uncertainty at the time of the review. This uncertainty may reduce investment incentives, and hence impair dynamic efficiency. Given the long-lived nature of assets in airfield activities, and that investment pay-back periods are much longer than the periods between price control reviews, there is the potential for regulatory uncertainty to impede efficient investments.

Summary

13.44. In summary, the preceding discussion on the costs of control under price-cap regulation has arrived at the following preliminary qualitative assessment:

- Where the current regulatory regime has not prevented significant excess returns and inefficiencies from emerging, those excess returns and inefficiencies could be reduced (or equivalently, benefits could be created) by the introduction of price cap control.

- The direct costs of the price cap regime would be probably somewhat greater than those of the current regime.

- The indirect costs can probably be reflected in the imperfect attainment of the potential efficiency gains. To quantify these costs the Commission has assumed, conservatively, that 50% of the potential efficiency gains would be realised.

- The acquirers are likely to receive most of the benefits of price control, and could indirectly (through higher charges) pay most of the costs.

Pricing Negotiations

13.45. The potential costs and benefits of price-constrained negotiations were discussed in chapter 12. This is put forward as a 'lighter' form of price control in which the parties would be required to negotiate over prices within a framework (for example, a price band) set by the Commission.

Direct Costs

13.46. The aim of price-constrained negotiation would be to enhance the effectiveness of the current regulatory regime without significantly increasing its costs. If that were successful, the direct (or compliance) costs of price-constrained negotiation would be similar to, and fall largely on the same parties as, those in the counterfactual. However, the Commission would be involved, and so its costs would need to be included. In addition, the setting of the price band within which negotiations would be conducted would require a substantial investigation, possibly not far different from that needed for a price review under price-cap regulation. To render the negotiations more effective would probably require enhanced disclosure of information by the regulated entity, which in itself would add to its costs. Hence, overall, the direct costs may in practice not be as low as would be hoped.

13.47. Moreover, much would depend upon how the regime actually operated in practice, and whether or not the different parties were co-operative. The regulator might be less involved in determining outcomes where parties were able to reach their own negotiated agreements. In this case control costs might be close to those currently incurred. However, where parties could not reach agreement, and the regulator is called in to act, administration costs may rise and become significant, especially if each party privy to a negotiation were to have a right to be heard by the Commission.

13.48. In Australia, for example, telecommunication regulation has relied on negotiations between contracting parties regarding network access/interconnection, with the ACCC acting as arbitrator in the case of dispute. Since its introduction in 1997, and until March 2000, there were 37 arbitration cases brought before the ACCC, of which only 7 were decided. This may reflect problems in the Australian approach, but may also be indicative of the difficulties inherent in arbitration where difficult commercial questions are involved.[197]

13.49. It may well be, therefore, that price-constrained negotiation would be as onerous as price-capping in terms of the direct costs incurred.

Indirect Costs

13.50. Given that price-constrained negotiation would involve setting a price, albeit as a range, it seems likely that problems similar to those expected under price-capping could arise. The price range would probably have to build in an allowance for future efficiency gains, as well as future investment requirements. It would not be realistic to expect all prospective efficiencies to be realised, and trade-offs between competing goals would be present. This might imply a need for a relatively wide price range to allow for flexibility, but there would be no guarantee that outcomes freely arrived at within the specified range would necessarily reflect the most efficient outcome. In essence, the price range may in practice simply set the bounds on a contest of relative bargaining strengths between the parties.

---

[197] Network Economics Consulting Group, *Assessment of the Telecommunications Regulatory Regime in Australia*, March 2000.

13.51. There may be little regulatory certainty for market participants (including acquirers) from negotiation, as ultimately the regulator may be required to act.

13.52. In the light of the foregoing, it seems likely that the indirect costs from this form of control would be similar to those for price-capping.

Summary

13.53. In summary, the preceding discussion on the possible costs of price-constrained negotiation as a form of control has arrived at the following preliminary qualitative assessment:

- Where the current regulatory regime has not prevented significant inefficiencies from emerging, those inefficiencies could be reduced (or equivalently, benefits could be created) by the introduction of a price-constrained negotiation control regime.

- The direct costs of the price-constrained negotiations regime would probably somewhat greater than those of the current regime.

- The indirect costs can probably be reflected in the imperfect attainment of the potential efficiency gains. To quantify these costs it has been assumed conservatively that 50% of the potential efficiency gains would not be realised.

- The acquirers are likely to receive most of the benefits of price control and could indirectly (through higher costs) pay most of the costs.

ASSESSING NET BENEFITS TO ACQUIRERS

13.54. The discussion to this point is summarised in table 58 which brings together the Commission's preliminary estimates of the potential benefits and costs to acquirers of introducing price control for airfield activities. The allocative efficiencies and transfers per annum for AIAL are based on an average of the 4 years worth of results shown above. The figures for CIAL are based on the first years results after the price rises. WIAL figures are based on their results for 2000.

Table 58
Estimates of the Potential Benefits and Costs to Acquirers of Price Control on Airfield Activities at Each Airport, Per Annum

	AIAL	WIAL	CIAL
Benefits			
Reduced excess returns and reduced allocative inefficiency (consumer surplus to acquirers)	$4,417,055	$0	$3,893,881
Reduced productive inefficiency	$131,910	$45,630	$60,660
Reduced dynamic inefficiency	$6,711,684	$0	$49,218
Total Benefits	*$11,260,649*	*$45,630*	*$4,003,759*

	AIAL	WIAL	CIAL
Costs			
Direct costs	$1,200,000	$1,200,000	$1,200,000
Indirect costs (up to 50% of the benefits above)	$5,630,324	$22,815	$2,001,879
Total Costs	*$6,830,324*	*$1,222,815*	*$3,201,879*
Net Benefits to Acquirers	**$4,430,325**	**$0**	**$2,522,833**

13.55. The table is structured so that the estimated benefit figures assume that all of the potential efficiency and transfer gains for acquirers relative to the counterfactual are realised, but the costs then include a deduction of up to half of each of those benefits to reflect the indirect costs associated with price control. The 50% deduction is considered to be a conservatively high figure to form the lower bound of the net benefit range; the upper bound is formed by assuming that the deduction is zero.

13.56. The direct costs are estimated on the basis of the following assumptions:

- That the annual cost of the present regime per airport in the counterfactual is one-third of the estimate of $2.5 million given by the Australian PSA quoted above, or about $800,000 each.

- That the costs of price control per airport are $3.75 million in price review years, and $1.5 in intervening years (with price being reviewed every five years), giving a five year total of $9.75 million, and an annual average of about $2 million.

13.57. On this basis, the annual additional cost per airport of airfield activities being subject to price control would be $2 million less $800,000, or $1.2 million. Assuming, conservatively, that acquirers ultimately bear all of the costs, then the additional costs to acquirers would be $1.2 million.

13.58. The annual allocative efficiency and transfers figures are calculated differently for each of the airports: for AIAL they are based on an average of the of the 4 years worth of results shown above; for CIAL they are the forecast results for a one year (all years the same); and for WIAL the results for its 2000 financial year. As noted earlier, these choices were constrained by data availability.

13.59. Overall, table 58 indicates that on the basis of the preliminary estimates given, acquirers would gain a net benefit of $4.4 million per annum if airfield activities at AIAL were to be subject to price control, and a net benefit of $2.5 million if airfield activities at CIAL were to be subject to price control. However, acquirers would experience a net loss if price control were to be applied to airfield activities at WIAL. This outcome would not change if a less conservative estimate of the indirect costs of control were to be used instead.

CONCLUSION

13.60. In this chapter the Commission has considered the second requirement in section 52, namely whether control is "necessary or desirable...in the interests of" acquirers. This question was approached by attempting to measure, at each of the three airports, the benefits that acquirers would be likely to receive if airfield activities were to be

subject to price control, net of the likely costs of such control that would be borne by those same acquirers (where the costs of control are those additional to those already being incurred by the present regulatory regime). Only then can it be determined whether the interests of acquirers would be met by price control.

13.61. The analysis proceeded by a series of steps. First, the appropriate counterfactual was considered, and was defined as the status quo. Secondly, the relevant "acquirers" were defined as those who directly or indirectly acquire the services of airfield activities, regardless of whether there are New Zealanders or overseas residents. Thirdly, drawing upon the analysis and estimates made in chapter 10, the benefits to acquirers were defined and measured. These benefits were essentially the extra consumers' surpluses received by acquirers that would flow from the price falls resulting from the elimination by price control of excess returns and excess costs. However, it was recognised that as price control is an imperfect tool, not all of the potential gains in the counterfactual would be realised. Fourthly, the costs of price control that might fall upon acquirers had to be assessed. This was a difficult exercise as the costs of regulation over and above those currently incurred had to be estimated, and then the proportion of them falling upon acquirers had to be assessed.

13.62. Finally, the costs so defined had to be netted off from the benefits in order to find whether price control at any of the airports was "necessary or desirable...in the interests of" acquirers. Although some of the benefits and costs were incapable of precise measurement, or even of measurement at all, the Commission has reached the preliminary conclusion that the net benefits under this test are likely to be positive at AIAL and CIAL, and negative at WIAL.

13.63. Therefore, the Commission is able to conclude on a preliminary basis, that the second requirement of section 52 is met, and it is necessary or desirable in the interests of acquirers to control of the airfield activities supplied by AIAL and CIAL. The requirement is not met in respect of the airfield activities supplied by WIAL.

13.64. However, arguably, this is only an intermediate step. The Commission now has to consider the further step as to whether it considers that price control should be recommended.

13.65. The following comments are sought in connection with the analysis presented in this chapter:

- Is the Commission's approach to determining whether section 52(b) is met correct?

- Is the Commission's assessment of the extent to which excess returns, allocative, productive, and/or dynamic efficiency could be improved as a result of airfield activities being controlled correct?

- Is the Commission's formulation of the likely counterfactual should airfield activities not be controlled, and the various features of that counterfactual, appropriate?

- Is the Commission's assessment of the benefits to acquirers from airfield activities being controlled, relative to the likely counterfactual correct?

- Is the Commission's assessment of the additional costs of control under the Commerce Act, compared to the status quo correct?

- Is the Commission's assessment of the costs of control that acquirers are likely to bear correct?

- Is the Commission's preliminary view that the airfield activities supplied by AIAL and CIAL satisfy section 52(b)—that it is necessary or desirable in the interests of acquirers to control the airfield activities supplied by AIAL and CIAL—correct?

14. SHOULD AIRFIELD ACTIVITIES BE CONTROLLED?

INTRODUCTION

14.1. The Minister may consider making a recommendation to control goods or services when satisfied that the two requirements under section 52 are established: namely, that competition in the market is "limited or is likely to be lessened", and that control is "necessary or desirable...in the interests of" acquirers. In the analysis to this point, the Commission has reached the preliminary conclusion that the first limb of this test is satisfied with respect to the provision of airfield activities at all three airports (see chapter 5), and that there is evidence that the second limb is satisfied with respect to the provision of airfield activities at AIAL and CIAL (see chapter 13).

14.2. The Minister has further required the Commission to report on whether it considers market conditions are such that the Minister should recommend that the Governor-General make an Order in Council imposing control over charges for airfield activities at the three major international airports. As discussed in chapter 2, even if the Commission's report satisfied the Minister that there was evidence that both requirements under section 52 of the Commerce Act were met, the Minister nevertheless has an ultimate discretion as to whether to recommend that goods or services should be controlled under the Commerce Act.

14.3. The Commission considers that in determining whether it should advise the Minister to recommend control, it should have regard to the wider scheme of the Commerce Act, and to the goals that the Commerce Act is intended to promote. This might suggest that broader interests, rather than the interests solely of acquirers, should be considered. It has often been argued that while the former long title of the Commerce Act stated that its purpose was to promote competition in markets in New Zealand, competition should be seen as a means to an end, and that the underlying purpose of the Commerce Act was to promote economic efficiency. This approach has been endorsed by the courts. For example, the Court of Appeal in *Tru Tone Ltd v Festival Records* stated that the Commerce Act:[198]

> ...is based on the premise that society's resources are best allocated in a competitive market where rivalry between firms ensures maximum efficiency in the use of resources.

14.4. Subsequently, the Commerce Act was amended in 1990, when the addition of section 3A seemed to place a greater stress on efficiency in the implementation of the public benefit test:

> Where the Commission is required under this Act to determine whether or not, or the extent to which, conduct will result, or will be likely to result, in a benefit to the public, the Commission shall have regard to any efficiencies that the Commission considers will result, or will be likely to result, from that conduct.

14.5. Efficiency arguments draw strength from the authorisation provisions, under which a trade practice or business acquisition that would breach the respective thresholds of

---

[198] (1998) 2 TCLR 542, 548.

anti-competitiveness can still be authorised, essentially on the grounds that despite the diminution of competition, they would promote efficiency more effectively than the competitive alternative. Arguably, such an approach would be appropriate for considering whether to recommend price control; control would then be recommended only when it would lead to a more efficient outcome. This would require an analysis of the public benefit type used by the Commission in authorisations, under which the impact on the wider public interest would be tested for each of the three airports.

14.6. Under the recent amendment to the Commerce Act, the long title of the Commerce Act was changed so that its purpose now "is to promote competition in markets for the long-term benefit of consumers within New Zealand." The issue is whether this has led to a fundamental change in the purpose of the Commerce Act. On a first sighting, the new emphasis on consumers might be interpreted to require an approach akin to that used in chapter 13, where only the interests of acquirers (the direct or indirect consumers of the services of airfield activities) have to be considered. However, the use of the term "long-term benefit" would appear to imply a broader focus. In the long-term, New Zealand consumers in general will benefit from the continuous improvements in the allocation of resources, and the nature of products and production processes which is encouraged by the competitive process. Market supply is important. Measures that may benefit consumers in the short-term—such as price cuts—may ultimately be harmful if they unduly suppress dynamic efficiency, thereby reducing benefits in the future. On this view, the new wording in the purpose statement does no more than make explicit what was already implicit—that all production ultimately benefits consumers and that Zealand consumers will benefit most when production is efficient.

14.7. Further, the concentrated nature of many markets in New Zealand, flowing from the small size of the economy, it is arguably likely that many markets would meet the relatively low thresholds set by the two conditions in section 52 of the Commerce Act. It seems inconceivable that Parliament would have set such low thresholds with the intention that many markets would become subject to price control, in the light of the strong trend towards deregulation of the economy since the mid-1980s. Rather, the intention may have been to curtail monopoly behaviour by increasing the implicit 'threat' of price control, but to have price control introduced on a much more selective basis only where a clear net efficiency benefit could be demonstrated.

14.8. The purpose of this chapter, therefore, is to consider whether the price control of the airfield activities at any of the three airports can be recommended on efficiency grounds.

EFFICIENCY ASSESSMENT

14.9. The efficiency analysis is based on the same counterfactual—the status quo—as was used in the analysis in chapter 13. Likewise, the focus is not limited to New Zealanders; benefits to foreigners are also included. The same changes that would be brought by the introduction of price control, as examined in chapter 10, are also relevant here. What does change is the overall perspective used.

14.10. In chapter 13, the only concern was with the interests of acquirers of the services of airfield activities. Any reduction in price for those services brought about by price control would lead to acquirers gaining a benefit, in the form of an increase in consumer surplus. Any corresponding loss of profit to the airport would be of no consequence in this calculus. Similarly, any increase in prices caused by acquirers bearing the costs of price control would be a negative benefit or detriment. Costs borne by others would not be relevant.

14.11. In this chapter, the focus shifts from the partial view—the interests of acquirers—to the broader focus of the 'interests' of the economy as a whole. Here the concern is one of maximising economic efficiency, that is to say, of maximising the attainment of allocative, productive and dynamic efficiencies. Under this efficiency standard, wealth transfers between different groups within the economy must be ignored. For example, when a firm reduces its costs but does not pass on the savings in lower prices, there would be no benefit to its customers, but there would be an improvement in (productive) efficiency. This change would be considered to have a nil impact under the "interests of acquirers" approach, but a positive impact under the efficiency standard. The latter approach is concerned with efficiency, regardless of who actually benefits directly, whereas the former is only concerned with changes that benefit one particular interest group.

14.12. Put another way, the "interests of acquirers" approach places considerable emphasis on the distribution of income, whereas the efficiency approach places very little. For example, when the price is cut, the dollars of welfare gain accruing to the buyers are balanced by the dollars of welfare loss suffered by the producers. Given the inherent difficulty in making economic welfare judgements on the appropriateness of different distributions of income, the efficiency standard falls back on the assumption that such transfers of income between the two groups balance out in the aggregate, in which case the welfare of society as a whole is unaffected. In the airports context, any reduction in excess returns would, therefore, not be considered a benefit from an efficiency perspective, unless it had other spill-over effects (discussed below).

14.13. The spill-over effects of monopoly pricing are difficult to quantify. However, they are a relevant consideration from an efficiency perspective. The excess returns accruing to the airport could be wasted on relatively inefficient new investment spending, or through inflated operating costs, because of a subsidy effect. In addition, outcomes in down-stream markets (including those servicing domestic passenger travel, international passenger travel, domestic freight, and international freight) related to the aircraft movement market will be distorted.

14.14. The costs identified in chapter 13, are equally relevant from an efficiency perspective. However, the issue as to whether acquirers bear the costs of control or not is irrelevant. The costs of the price control approach over-and-above those in the counterfactual are relevant.

ASSESSMENT OF NET EFFICIENCY BENEFITS

14.15. Drawing upon the preceding discussion, and the results produced in chapter 10, the estimated annual efficiency effects of introducing price control on airfield activities at each of the three airports are summarised in table 59. The allocative efficiencies per

annum for AIAL are based on an average of the 4 years worth of results shown above. The figures for CIAL are based on the first years results after the price rises. WIAL figures are based on their results for 2000.

Table 59
Estimates of the Annual Net Efficiency Gains of the Price Control Airfield Activities at Each Airport, Per Annum

	AIAL	WIAL	CIAL
Benefits			
Reduced allocative inefficiency.	$436,678	$0	$359,891
Reduced productive inefficiency	$131,910	$45,630	$60,660
Reduced dynamic inefficiency	$6,711,684	$0	$49,218
Total Benefits	*$7,280,272*	*$45,630*	*$469,769*
Costs			
Direct costs	$1,200,000	$1,200,000	$1,200,000
Indirect costs (up to 50% of the benefits above)	$3,640,136	$22,815	$234,884
Total Costs	*$4,840,136*	*$1,222,815*	*$1,434,884*
Net Benefits	**$2,440,135**	**$0**	**$0**

14.16. Table 59, as with the comparable table in chapter 13, is structured so that the estimated efficiency gain figures assume that all of the potential efficiency gains relative to the counterfactual are realised, but that the costs then include a deduction of up to half of each of those benefits to reflect the indirect costs associated with price control. As noted earlier, the 50% deduction is considered to be a conservatively high figure to form the lower bound of the net benefit range; the upper bound is formed by assuming that the deduction is zero.

14.17. As discussed above, the gains ignore the wealth transfers as these are assumed to have no significant effect on welfare. This has the effect of apparently reducing the indirect costs of price control relative to the situation described in chapter 13. The explanation is that the same reduction in transfers occur here too, but since transfers are not regarded as benefits under the efficiency standard, the erosion in their size cannot be counted as a cost either.

14.18. The direct costs given in table 59 are the same as those quoted in the comparable table in chapter 13 (since all were assumed to be passed on to acquirers), which were estimated as follows:

- The annual cost of the present regime per airport in the counterfactual is one-third of the estimate of $2.5 million given by Air NZ quoted above, or about $800,000 each.

- The costs of price control per airport are $3.75 million in price review years, and $1.5 in intervening years (with price being reviewed every five years), giving a five year total of $9.75 million, and an annual average of about $2 million.

14.19. On this basis, the annual additional cost per airport of airfield activities being subject to price control would be $2 million less $800,000, or $1.2 million.

14.20. The annual allocative efficiency and transfers figures are calculated differently for each of the airports: for AIAL they are based on an average of the of the 4 years worth of results shown above; for CIAL they are the forecast results for a one year (all years the same); and for WIAL the results for its 2000 financial year. As noted earlier, these choices were constrained by data availability.

14.21. Overall, table 59 indicates that there would be net benefits of $2.4 million per annum if airfield activities at AIAL were to be subject to price control. However, there would be a net efficiency loss if price control were to be applied to airfield activities at CIAL or WIAL. These outcomes are unlikely to change, either if a lower estimate of the indirect costs of control were to be used instead; or if the further efficiency gain from the reduced spill-over effect of monopoly pricing in the aircraft movement market to other markets were introduced. The outcome for CIAL is the most sensitive to these qualifications, although it seems unlikely that the outcome at CIAL would change.

CONCLUSION

14.22. In this chapter, the Commission has undertaken an efficiency assessment of whether price control should be recommended. This question was approached by attempting to measure, at each of the three airports, the total efficiency benefits that could emerge if airfield activities were to be subject to price control, net of the likely costs of such control that would be created (where the costs of control are those additional to those already being incurred by the present regulatory regime). Only then can it be determined whether there are likely to be net benefits from price control.

14.23. The same counterfactual as for chapter 13 was used, and the analysis drew upon estimates made in chapter 10. The benefits of control include the extra consumer and producer surpluses that would flow from the price falls and reduced productive and dynamic inefficiencies of the counterfactual. However, it was recognised that as price control is an imperfect tool, not all of the potential gains in the counterfactual would be realised.

14.24. The costs of price control were assessed from an efficiency perspective. All the costs, not just those falling on acquirers, were included in the assessment.

14.25. The costs so defined had to be netted off from the benefits in order to find whether price control should be recommended on efficiency grounds. Although some of the benefits and costs were incapable of precise measurement, the Commission has reached the preliminary conclusion that the net benefits under this test are likely to be positive for the airfield activities supplied by AIAL. However, there appear to be no net benefits in respect of the airfield activities supplied by WIAL and CIAL.

14.26. The following comments are sought in connection with the analysis presented in this chapter:

- Is the Commission's analysis of net efficiency benefits appropriate?

- Is the Commission's assessment of the public benefits to be gained from airfield activities being controlled, relative to the likely counterfactual correct?

- Is the Commission's assessment of the lessons that can be learned from the experiences of airport regulation internationally correct?

- Is the Commission's preliminary view that the airfield activities supplied by AIAL should be controlled correct?

- Is the Commission's preliminary view that the airfield activities supplied by WIAL and CIAL should not be controlled correct?

15. CONCLUSION

SECTION 54 NOTICE

15.1. Section 53 of the Commerce Act 1986 (the Commerce Act) allows the Governor-General, on the recommendation of the Minister of Commerce (the Minister), by Order in Council to declare that specified goods or services be controlled. Section 56 gives the Minister the power, by notice in writing, to require the Commerce Commission (the Commission) to report to him by a specified date on whether he should make any recommendation for an Order in Council.

15.2. Acting pursuant to the then section 54(1) of the Commerce Act, the Minister, in a letter of 26 May 1998, has required the Commission to report to him on the following matters:

> A whether there is evidence that airfield activities {as defined in the Airport Authorities Amendment Act 1997} provided by the three major international airports (Auckland, Wellington and Christchurch) are supplied or acquired in a market in which competition is limited or is likely to be lessened; and it {is} necessary or desirable for the prices of these goods or services to be controlled in accordance with the {Commerce} Act in the interests of users, or consumers, or as the case may be, suppliers; and
>
> B whether market conditions are such that the Commission believes that {the Minister} should recommend to the Governor-General that he make an Order in Council under section 53 of the {Commerce} Act invoking price controls over charges for airfield activities at the three major international airports.

15.3. Specific matters which the Commission is required to consider and report on to the Minister are the following:

> 1. Whether {price control over} charges should be introduced for airfield activities at one or more of the three major international airports.
>
> 2. If the Commission is of the view that price control should be introduced, to which (i) regions, areas, or localities in New Zealand; (ii) quantities, qualities, grades, or classes; and (iii) different persons or classes of persons, should price control be applied?
>
> 4. What conditions, tests, or thresholds does the Commission consider would be useful in judging whether (i) airfield activities are or will be supplied in a market in which competition is limited or likely to be lessened; and (ii) it is necessary or desirable for the prices of airfield activities to be controlled in accordance with the {Commerce} Act.
>
> If price control was introduced (i) what form of price control would the Commission apply; (ii) and why; (iii) how would the Commission operate this form of price control; and (iv) what time and/or in what conditions should price control end?

15.4. The Notice requires the Commission to report to the Minister in respect of sections 52, 53 and 57A of the Commerce Act with regard to the airfield activities currently supplied by Auckland International Airport Limited (AIAL), Wellington International Airport Limited (WIAL), and Christchurch International Airport Limited (CIAL). In presenting its report, the Commission has to outline the "conditions, tests, or thresholds" considered. In addition, the Notice asks that the Commission report on how it would operate any controls under Part 5 of the Commerce Act.

DRAFT RECOMMENDATION

15.5. **T**he Commission's draft recommendation is as follows:

- The requirement in section 52(a) of the Commerce Act is satisfied for all three airports. There is evidence that airfield activities (as defined in the Airport Authorities Amendment Act 1997) provided by AIAL, WIAL and CIAL are supplied or acquired in a market in which competition is limited or is likely to be lessened.

- The requirement in section 52(b) of the Commerce Act is satisfied for two airports. There is evidence that it is necessary or desirable for the prices of the airfield activities supplied by AIAL and CIAL to be controlled in accordance with the Commerce Act in the interests of the acquirers of airfield activities.

- Based on an assessment of the net efficiency benefits, the Commission's preliminary view is that market conditions are such that only the airfield activities supplied by AIAL be controlled.

15.6. Interested persons are invited to make submissions on this draft report and the Commission's draft recommendations.

APPENDICES

APPENDIX 1

MINISTERIAL REQUEST

1. Letter of request from Minister of Commerce 27 March 1998
2. Commerce Commission letter to Minister seeking clarification 5 May 1998
3. Letter of request from Minister of Commerce 26 May 1998

Office of the Minister COMMERCE Wellington 1

MINISTRY OF COMMERCE
Te Manatū Tauhokohoko

27 March 1998

Mr Peter Allport
Acting Chairman
Commerce Commission
PO Box 2351
WELLINGTON

Dear Mr Allport

COMMERCE ACT 1986: SECTION 54(1) REQUEST FOR REPORT: THE MARKET FOR THE PROVISION OF AIRFIELD SERVICES

Section 53 of the Commerce Act 1986 ("the Act") empowers the Governor General (acting on the recommendation of the responsible Minister) to make an Order in Council declaring that the prices for specified goods and services be controlled in accordance with the Act.

In determining whether to make a recommendation to the Governor-General, the responsible Minister may, under section 54 of the Act require the Commerce Commission to report on whether to make such a recommendation. The purpose of this letter is to initiate a report under section 54 of the Act.

Relevant Goods and Services

The goods or services to which this letter relates are airfield facilities. These facilities are defined in the Airport Authorities Amendment Act 1997 ("the AAA Act") and include the facilities and services provided to enable th elanding and take-off of aircraft. The AAA Act defines airfield activities as:

(a) The provision of any one or more of the following:

(i) Airfields, runways, taxiways and parking aprons for aircraft;

(ii) Facilities and services for air traffic and parking apron control;

(iii) Airfield and associated lighting;

(iv) Services to maintain and repair airfields, runways, taxiways and parking aprons for aircraft;

(v) Rescue, fire, safety and environmental hazard control services;

(vi) Airfield supervisory and security services; and

(b) The holding of any facilities and assets (including land) acquiured or held to provide airfield activities in the future (whether or not used for any other purpose in the meantime).

Parameters of this Report

Acting pursuant to the power in section 54(1) of the Act, I require the Commerce Commission to report to me by no later than 14 December 1999 on the following matters:

A whether there is evidence that airfield facilities provided by the three major international airports (Auckland, Wellington and Christchurch) are supplied or acquired in a market in which competition is limited or is likely to be lessened; and it is necessary or desirable for the prices of these goods or services to be controlled in accordance with the Act in the interests of users, or consumers, or as the case may be, suppliers; and

B whether market conditions are such that the Commission believes that I should recommend to the Governor-General that he make an Order in Council under section 53 of the Act invoking price control over charges for airfield facilities at the three major international airports.

Specific matters on which I require the Commission to consider and report to me on are:

1. Whether charges should be introduced for airfield facilities at one or more of the three major international airports.

2. If the Commission is of the view that price control should be introduced, to which (i) regions, areas, or localities in New Zealand; (ii) quantities, qualities, grades, or classes; and (iii) different persons or classes of persons, should price control be applied?

3. What conditions, test, or thresholds does the Commission consider would be useful in judging whether (i) airfield facilities are or will be supplied in a market in which competition is limited or likely to be lessened; and (ii) it is necessary or desirable for the prices of airfield facilities to be controlled in accordance with the Act.

4. If price control was introduced (i) what form of price control would the Commission apply; (ii) and why; (iii) how would the Commission operate this form of price control; and (iv) what time and/or in what conditions should price control end?

Background information that may assist you in your investigation is contained in the following papers:

- Cabinet Submission CIE(95)318 and Minute CAB(95)M46/5G;

- Cabinet Committee on Industry and Environment (CIE(97)148) and Minute (CIE(97)M31/1); and

- Discussion document: "Review of Airport Regulation: Proposals for Consultation".

I look forward to receiving your report in due course.

Yours sincerely

Hon John Luxton
Minister of Commerce

COMMERCE COMMISSION

Wellington
J2773

5 May 1998

Hon John Luxton
Minister of Commerce
Parliament Buildings
WELLINGTON

Dear Mr Luxton

Price Control Enquiry: Airports

On 27 March 1998 you wrote to the Commission requiring it to enquire into, and report on, whether you should recommend that prices for certain airports services be controlled pursuant to the Commerce Act.

The Commission has considered your letter and would appreciate clarification of one technical point. We note that the relevant goods or services for the enquiry have been referred to in your letter as airfield *facilities*. These are stated to be those defined as airfield *activities* in the Airport Authorities Amendment Act 1997. That Act includes, within the definition of airport activities, reference to various facilities. While the distinction between airport *activities* and airport *facilities* may be of a minor nature, for the sake of clarification the Commission suggests that it be required to report on whether airport *activities*, as defined in the relevant section of the Airport Authorities Amendment Act, should be controlled in accordance with the Commerce Act and reference not be made to airport *facilities* in the request.

We believe this will remove any doubt as to the scope of your request by tying it to the definitions used in the appropriate statute.

Would you please consider this request. If you agree, the appropriate change could be effected either by a follow up letter clarifying your letter of 27 March or by issuing a new letter to the Commission which could then supersede your earlier one. Thank you for your assistance in this matter.

Yours sincerely

Peter Allport
Chairman

Office of the Minister COMMERCE Wellington 1

MINISTRY OF COMMERCE
Te Manatū Tauhokohoko

26 May 1998

Mr Peter Allport
Chairman
Commerce Commission
PO Box 2351
WELLINGTON

Dear Mr Allport

I am writing in response to your letter of 5 May 1998 regarding the inquiry into prices for airport services.

In reference to my letter to you of 27 March 1998, you note that the relevant goods or services for the inquiry have been referred to as airfield facilities. These were stated to be those defined as airfield activities in the Airport Authorities Amendment Act 1997 ("the Act").

In your letter, you note that although the distinction between airport activities and airport facilities may be of a minor nature, but for the sake of clarification it would be preferrable that the Commission be required to report on whether airport activities (as defined in the Act) should be controlled in accordance with the Commerce Act 1986. I concur with your view. Thus, acting pursuant to the power in section 54(1) of the Commerce Act 1986, I require the Commerce Commission to report to me by no later than 14 December 1999 on the following matters:

A whether there is evidence that airfield activities provided by the three major international airports (Auckland, Wellington and Christchurch) are supplied or acquired in a market in which competition is limited or is likely to be lessened; and it necessary or desirable for the prices of these goods or services to be controlled in accordance with the Act in the interests of users, or consumers, or as the case may be, suppliers; and

B whether market conditions are such that the Commission believes that I should recommend to the Governor-General that he make an Order in Council under section 53 of the Act invoking price controls over charges for airfield activities at the three major international airports.

Specific matters on which I require the Commission to consider and report to me on are:

1. Whether charges should be introduced for airfield activities at one or more of the three major international airports.

2. If the Commission is of the view that price control should be introduced, to which (i) regions, areas, or localities in New Zealand; (ii) quantities, qualities, grades, or classes; and (iii) different persons or classes of persons, should price control be applied?

3. What conditions, tests, or thresholds does the Commission consider would be useful in judging whether (i) airfield activities are or will be supplied in a market in which competition is limited or likely to be lessened; and (ii) it is necessary or desirable for the prices of airfield activities to be controlled in accordance with the Act.

If price control was introduced (i) what form of price control would the Commission apply; (ii) and why; (iii) how would the Commission operate this form of price control; and (iv) what time and/or in what conditions should price control end?

The definition of “airfield activities” is as defined in section 2 of the Act.

Once again, I look forward to receiving your report in due course.

Yours sincerely

Hon John Luxton
Minister of Commerce

APPENDIX 2

LIST OF PARTIES WHO MADE SUBMISSIONS ON A98/1 PROCESS AND PRELIMINARY ISSUES 4 JUNE 1998

1. Air New Zealand Limited

2. Airways Corporation of New Zealand Limited

3. Ansett New Zealand Limited

4. Auckland International Airport Limited

5. Board of Airline Representatives of New Zealand Incorporated

6. Christchurch International Airport Limited

7. Qantas Airways Limited

8. Wellington International Airport Limited

APPENDIX 3

REGISTER OF INTERESTED PARTIES

1. Caterair Limited
   C/- Chapman Tripp Sheffield Young
   P O Box 2206
   Auckland

2. Air New Zealand Limited
   Private Bag 92007
   Auckland

3. Airways Corporation of New Zealand Limited
   P O Box 294
   Wellington

4. Board of Airline Representatives of New Zealand Incorporated
   P O Box 2779
   Auckland

5. Christchurch International Airport Limited
   P O Box 14001
   Christchurch

6. Auckland International Airport Limited
   P O Box 73020
   Auckland

7. Wellington International Airport Limited
   P O Box 14175
   Wellington

8. Coastal Tankers Limited
   C/- Kensington Swan
   P O Box 10246
   Wellington

9. Qantas Airways Corporation
   P O Box 59
   Auckland

10. Qantas New Zealand Limited
    P O Box 62667
    Ellerslie
    Auckland

11. James Armour
Rudd Watts & Stone
P O Box 2793
Wellington

12. Aviation Industry Association of New Zealand Incorporated
P O Box 2096
Wellington

13. Palmerston North Airport Limited
P O Box 4384
Palmerston North

14. Dunedin Airport Limited
Private Bag 1922
Dunedin

15. Waikato Regional Airport Limited
Airport Road
R D 2
Hamilton

16. Rotorua Regional Airport Limited
P O Box 7221
Te Ngae
Rotorua

17. Tauranga Airport Authority
C/- Tauranga District Council
Private Bag
Tauranga

18. Hertz New Zealand Limited
Private Bag 4716
Christchurch

19. Adrienne Wing
Gilbert & Tobin
P O Box 90-786
Auckland Mail Centre
Auckland

20. New Zealand Post Limited
P O Box 90949
Auckland

21. Avis Rent A Car Limited
Private Bag 92809
Penrose
Auckland

22. Duty Free Stores Limited
P O Box 21-042
Wellington

23. Anne Callinan
Partner
Simpson Grierson
Private Bag 92518
Wellesley St
Auckland

APPENDIX 4

LIST OF PARTIES WHICH WERE VISITED BY COMMISSION STAFF, AND FROM WHOM INFORMATION WAS SOUGHT, DURING THE PRELIMINARY PHASE OF THE INQUIRY

1. Air New Zealand Limited
2. Airways Corporation of New Zealand Limited
3. Qantas New Zealand Limited (formerly Ansett New Zealand Limited)
4. Auckland International Airport Limited
5. Australian Competition and Consumer Commission
6. Australian Department of Transport and Regional Services
7. Aviation Industry Association of New Zealand Incorporated
8. BAA Plc
9. Board of Airline Representatives of New Zealand Incorporated
10. British Airways
11. Christchurch International Airport Limited
12. Civil Aviation Authority of New Zealand
13. Competition Commission
14. Manchester Airport Plc
15. Melbourne Airport
16. Ministry of Transport
17. Qantas Airways Limited
18. Wellington International Airport Limited
19. United Kingdom Civil Aviation Authority Economic Regulation Group
20. United Kingdom Department of the Environment, Transport and the Regions
21. Sydney Airports Corporation Limited

APPENDIX 5

EXTENSION OF DEADLINE FOR REPORTING

1. Letter from Minister for Enterprise and Commerce 29 July 1999

OFFICE OF THE HON MAX BRADFORD
Minister for Enterprise and Commerce
Responsible for the Ministry of Commerce (including Energy and Industry)
and the Department of Labour

2 9 JUL 1999

Mr Mark N. Berry
Acting Chairman
Commerce Commission
P0 Box 2351
WELLINGTON

PRICE CONTROL STUDY OF AIRPORTS

As you know my predecessor as Minister of Commerce, Hon John Luxton, wrote to the Commission on 27 March 1998 requesting under Section 54 of the Commerce Act that the Commission report to him not later than 14 December 1999 on:

A whether there is evidence that airfield activities provided by the three major international airports (Auckland, Wellington and Christchurch) are supplied or acquired in a market in which competition is limited or is likely to be lessened; and it is necessary or desirable for the prices of these goods or services to be controlled in accordance with the Act in the interests of users, or consumers, or as the case may be, suppliers; and

B whether market conditions are such that the Commission believes that the Minister should recommend to the Governor-General that he make an Order in Council under Section 53 of the Act invoking price controls over charges for airfield activities at the three major international airports.

I am writing pursuant to Section 54, to require that the Commission extend the reporting date of this inquiry to 1 August 2002.

Cabinet agreed to an extended reporting date on 26 July 1999.

Apart from an extension in the reporting date, the terms of reference as set out in Mr Luxton's letter of 27 March 1998 and clarified in his subsequent letter of 27 May 1998. remain unchanged.

I am also writing to the three major airport companies, the Board of Airline Representatives of New Zealand and Air New Zealand informing them of the changed reporting time. I assume you will inform any other parties involved.

Yours sincerely

Hon **Max Bradford**
Minister for Enterprise and Commerce

APPENDIX 6

LIST OF PARTIES WHO MADE SUBMISSIONS ON A99/2 PROPOSED TIMETABLE FOR PROGRESSING THE INQUIRY 6 AUGUST 1999

1. Air New Zealand Limited
2. Airways Corporation of New Zealand Limited
3. Airwork (NZ) Limited, Airpost Limited and New Zealand Post Limited
4. Ansett New Zealand Limited
5. Auckland International Airport Limited
6. Aviation Industry Association of New Zealand Incorporated
7. Board of Airline Representatives of New Zealand Incorporated
8. Christchurch International Airport Limited
9. Dunedin Airport Limited
10. Qantas Airways Limited
11. Wellington International Airport Limited

APPENDIX 7

LIST OF PARTIES WHO MADE INITIAL SUBMISSIONS IN RESPONSE TO THE COMMISSION'S CRITICAL ISSUES PAPER A01/1, 16 MARCH 2001

1. Board of Airline Representatives of New Zealand Incorporated

2. Christchurch International Airport Limited

3. Wellington International Airport Limited

4. Auckland International Airport Limited

5. Gisborne Airport

APPENDIX 8

APPENDIX 9

APPENDIX 10

APPENDIX 11

APPENDIX 12