



The Competition Commission's Market Investigation of BAA

A submission by the Civil Aviation Authority

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Executive summary

Introduction

1. The CAA welcomes the opportunity to contribute to the Competition Commission's market investigation into BAA's UK airports.
2. Since the privatisation of BAA and the establishment of the current framework for the economic regulation of UK airports, the sector has experienced significant change including: the liberalisation of the European Aviation Area in 1993; the entry and subsequent rapid growth of no-frills carriers; the successive sales and development of the UK's regional airports; and, more recently, the agreement between the EU and the US to liberalise the market for transatlantic travel from 1 April 2008. In addition, the downstream market for air services has become more sophisticated, as the internet has enabled customers to compare alternative offers more effectively.

Scope of this paper

3. The OFT set out a number of issues in its Market Investigation Reference, including the effect of joint ownership on competition between the airports in the short run and in the long run. The OFT also highlighted the potential impact of joint ownership on investment incentives.
4. The extent to which an individual airport, or group of airports, faces significant competitive constraints is an empirical question, the answer to which is unlikely to rest on one of two pieces of decisive evidence. Rather, forming a reasonable expectation on the extent of competitive constraint faced will necessarily entail a balanced judgement of a wide range of evidence and indicators.
5. Against this background, and reflecting that the Competition Commission (CC) is in the preliminary stages of its review, this submission does not present a detailed assessment of the impact of BAA's joint ownership of UK airports on the degree of competition between airports. Rather, we have sought to:
 - highlight the nature of the principal interactions between airports, airlines and passengers;
 - identify a range of market features that the CC might wish to consider further when assessing the impact of BAA's joint ownership of 7 UK airports; and
 - provide some further information on airport economics and the existing regulatory framework from CAA's perspective as the specialist sector regulator.

Features of the UK airport market

6. In this paper, the CAA identifies a number of features that the CC should consider as part of its market investigation:
- The economics of airport operations
 - The form and impact of sector-specific economic regulation
 - Airport capacity constraints and allocation and trading of slots
 - Airport expansion: government policy, planning and airspace
 - BAA's joint ownership of airports around London and in Scotland

These features are described in more detail below.

The economics of airport operations

7. UK airports do not appear to possess the cost characteristics associated with natural monopoly businesses and there is therefore, the potential for airports to compete. The CAA's Regional Air Services study¹ documented evidence of increased competition between the UK regional airports for airlines and passengers. This suggests that the most appropriate regulatory model for airports is likely to require greater emphasis on enabling competition *between* infrastructure providers than in the price regulated utility sectors where there is typically a single infrastructure provider.
8. It is important to avoid characterising the nature of airport operation and airport competition as being determined exclusively by either passengers or airlines in isolation, as both affect competition between airports. Moreover, the extent of the variation in passenger and airline types and their likely responses to airport pricing strategies means that any analysis of the competitive constraints faced by an individual airport is likely to rest on a balanced judgement of a range of evidence (which may differ by airport), rather than any single, definitive, piece of analysis.
9. Similarly, the relevant airport market definitions will need to balance a number of interrelated issues and may be broader or narrower depending upon the airport(s) being considered and the purpose of the analysis. For example, the OFT's analysis of BAA's group of London airports focused on a geographic market that covered the South East and East Anglia planning regions, as this was sufficient to capture the majority of the issues relevant to their analysis. However, an analysis of the competitive constraints affecting each of the airports *individually* (i.e. were they to be in separate ownership) would be likely to require a differentiated approach for each BAA airport reflecting: their different geographic locations with respect to London; variations in the proximity of alternative airports; and differences between them in the types of carriers and passengers served.

¹ 'UK regional air services', CAA, February 2005

10. The nature of airport businesses may also have a material effect on the incentives – and ability – of an airport operator to adopt certain forms of conduct. A significant proportion of the costs incurred by an airport do not vary with traffic volumes – once constructed, the costs of terminals and runways are sunk and fixed. In addition, a significant proportion of the operating and security costs of an airport will be largely invariant to passenger numbers. By contrast, airport revenues from both aeronautical charges and their commercial activities, such as car parking and retail commissions, will tend to vary more closely with passenger numbers. Therefore, compared to a less capital-intensive business, airport profits are likely to be more sensitive to small changes in traffic volumes. This sensitivity will tend to reduce the incentive faced by an airport operator to raise prices and/or limit supply to the market.
11. The lead times associated with airport investment also mean that today's costs and service quality rely, to a significant degree, on yesterday's investment. The issue of airport investment can, therefore, be expected to be central to the assessment of the extent and nature of competition between airports and of the impact of this competition on the price and service received by passengers.

The form and impact of sector-specific economic regulation

12. Whilst economic regulation can seek to mirror incentives created by competition, it is likely to do so in an imperfect manner, reflecting the informational asymmetries between the regulated company and the regulator, as well as the inherent difficulty of identifying complex and changing consumer preferences.
13. The aviation industry has undergone significant change over the last 20 years, whereas over the same period the regulatory framework has remained largely unchanged.
14. In its recent publications², the CAA has highlighted that price control regulation is likely to affect the investment incentives faced by regulated (i.e. designated) and non-regulated airports. The CAA has also highlighted that the current circumstances at Stansted could mean application of a standard ('building block') price cap distorting significantly both BAA's investment incentives³ and airlines' reactions to any expansion plans.
15. As noted above, the CAA has not analysed the extent to which separate ownership would increase the degree of competition between UK airports. However, were greater competition between BAA's London airports possible that could reduce the need for economic regulation. Indeed, the CAA's analysis, as part of its price control review, of the competitive constraints facing Stansted suggests that there is a case for considering the removal of price control regulation at that airport, even with BAA's current ownership structure.

² See, for example, 'CAA's initial price control proposals - supporting paper 1', CAA, December 2006

³ See chapter 23 of 'Airports price control review - initial proposals for Heathrow, Gatwick and Stansted', CAA, December 2006

16. If greater competition between airports were not to remove the case for some form of economic regulation, it might still enable the scope of such regulation to be reduced and/or phased out over an appropriate transitional period, enabling regulation to be more targeted and proportionate.
17. In light of the above, an assessment of whether the current regulatory framework is sufficiently flexible to deliver proportionate regulatory responses as circumstances change appears timely. The CAA would also support a more wide-ranging review of the scope of the existing regulatory regime as part of the Commission's work.

Airport capacity constraints and allocation and trading of slots

18. An airport's ability to accept additional services can be constrained by the availability of physical airport infrastructure (for example, taxiway, stand and/or terminal capacity⁴) airport slots (e.g. available runway capacity for additional take-off and landings and air traffic flow management slots that provide access into the European airspace network⁵) and local airspace⁶ (the available physical volume of airspace in the immediate vicinity of an airport). Such constraints might apply at certain times of the day, at certain times of the year or to certain types of aircraft⁷. Airport capacity is typically referred to in terms of the "slots" made available to airlines.
19. All the major airports in London experience capacity constraints, some of which are easier to resolve than others. While incremental development of capacity can often be delivered without very significant additional capex (relative to the cost of the existing assets)⁸, larger airports often reach a point where incremental expansion costs are both significant and difficult to undertake simply through enhancing existing infrastructure. In such cases major lumpy investments in new runways, terminals or other facilities may be required with attendant expense and controversy.
20. As in many other markets, as infrastructure becomes more intensively used, and capacity constraints become binding, the value of access rights (in this case slots) tends to rise. This can put upward pressure on airfares and increase the cost of entry in the relevant airline markets. However, this may not be sufficient to conclude that slot constraints prevent, restrict or distort competition. A well-functioning market that involves significant investment in sunk infrastructure will tend to exhibit periods where capacity is relatively unconstrained – with access (slot) prices and airport returns that are relatively low – followed by periods where capacity is more constrained – with access (slot) prices and airport returns that are relatively high.

⁴ Or cargo reception facilities in the case of cargo operations.

⁵ These air traffic flow management departure slots, allocated by the Eurocontrol Central Flow Management Unit (CFMU) in Brussels, that ensure that adequate ATC capacity is available to meet demand across the European network.

⁶ Foot note what terminal airspace is

⁷ For example, there might be a limit on the suitable aircraft stands for larger aircraft.

⁸ For example, additional taxiways, aircraft stands and certain terminal developments.

21. Whilst it seems likely that airports with spare capacity compete more actively for airlines and passengers, it should also be noted that airports with low levels of slot availability might still be capable of supporting airline entry and/or passenger growth and, therefore, compete with other airports. In addition, airlines can redeploy slots between routes and can, particularly over longer timescales, employ larger aircraft. Further, where airlines are permitted to trade slots on the secondary market, more airlines that use slots more efficiently may be able to acquire suitable slots from incumbent operators that use them less efficiently. However, the potential impact of these factors may be more limited at highly constrained airports such as Heathrow, where the average aircraft size is already significantly above that at other airports, where there are very limited numbers of slots and the prospects for incremental capacity expansion are limited.
22. Overall, therefore, the cost and difficulty associated with airport expansion in the southeast is likely to mean that capacity constraints will affect the degree and nature of airport competition in the short-term and long-term.

Airport expansion: government policy, planning and airspace

23. The construction, operation and expansion of an airport imposes a range of effects on the interests of local communities and businesses, not least in terms of the noise and pollution caused by aircraft movements and passenger and cargo access to the airport. There is, therefore, a number of trade-offs to be made between the interests of various affected parties. As a consequence, planning law is a significant feature of the airports market that may materially affect the nature and degree of competition in this market.
24. The CAA is not well placed to provide the CC with evidence on the detailed operation of the UK planning system, or on changes that may take place in the future. However, it considers that any analysis of the airport market should distinguish between those elements of the planning regime that impose necessary constraints on the market – constraints within which all airports compete – from these that might unnecessarily distort competition by, for example, conferring undue advantage on certain parties or introducing avoidable uncertainty or delay into the process.
25. Government policy also has the potential to be a significant feature affecting the airports market and the potential for competition within it. Most directly, Government establishes planning law and the processes by which local authorities must reach planning decisions. But Government policy statements, such as its support in the 2003 Air Transport White Paper for the construction of additional runways at Stansted and Heathrow, are likely to condition the framework within which airport investment and local authority planning decisions are made.
26. That said, a number of other capital-intensive industries rely on the commercial decisions of competing suppliers to deliver additional capacity, even where local and/or national planning policy significantly affects the range of potential investments. So whilst the operation of the planning regime is likely to impact on

the nature of competition, its operation does not, in principle, prevent airports from competing.

27. Airspace is a finite resource. Safety is the absolute priority for the management of air traffic flows through a given volume of airspace. This is achieved through the application of, internationally agreed, horizontal, and vertical separation criteria that are applied to all aircraft operating within defined volumes of controlled airspace. In the southeast of England where there are multiple airports with high traffic volumes of aircraft with different performance characteristics on a wide variety of departure and arrival routes, there is a limit to the amount of traffic that can be accommodated safely at any one time.
28. Over time, incremental changes to controlled airspace volumes and modifications to arrival and departure routes have been made to increase capacity and improve the efficiency of the airspace. To date, all airspace change requests have been managed and implemented. However, the CAA and NATS are of the view that, were all of the SE airport development plans⁹ to come to fruition, there would not be sufficient airspace capacity to accommodate the scale of predicted traffic growth on the basis of current and predicted technology. As a consequence, airspace constraints may affect the future nature and degree of competition in this market.

BAA's joint ownership of airports around London and in Scotland

29. In general there is considerable evidence that airports can, and do, compete for passengers and for airline business. In recent years, a number of regional airports (for example, Liverpool, Prestwick and East Midlands) have successfully attracted passengers and airlines and have experienced rapid growth in their businesses. Furthermore, the OFT has cited evidence that Glasgow and Prestwick airports compete for passengers and airlines.
30. The CAA has considered the degree to which the London airports interact and has concluded that there are material interactions between the larger London airports and a number of regional airports, including Birmingham International and East Midlands. However, as discussed above there are a number of features of the airport market, particularly in the southeast of England that might constrain the degree to which airports effectively compete and, therefore, potentially limit the benefits that might otherwise be expected to accrue from competition.

Summary

31. BAA's airports provide services to a large number of passengers and have a material impact on whether the UK aviation sector best meets the needs of consumers. There has been considerable change in both the airports and airline markets, in the UK and internationally. Against this background, the CAA welcomes the Competition Commission's Market Investigation and looks forward to further opportunities to contribute to it.

⁹ As currently included in airport master plans and the DfT's Air Transport White Paper Progress Report (DfT, December 2006).

1. Introduction

Purpose of this document

- 1.1 This document is the CAA's first formal submission to the Competition Commission's (CC) Market Investigation into BAA's UK airports, responding to the CC's invitation to make representations or provide information on any matter relevant to the inquiry.
- 1.2 The CAA has also presented some background information to the CC, covering the passenger composition at the UK airports and the recent market trends¹⁰. The CAA has not repeated this material in this document.

The role of the CAA

- 1.3 The CAA is the UK's independent aviation regulator with civil aviation regulatory functions within a single, specialist body. The CAA's regulatory functions are: economic regulation; airspace policy; safety regulation; and consumer protection. Chapter 4 provides a summary of these four regulatory functions, including a more detailed description of the CAA's role as economic regulator than is set out below.
- 1.4 The CAA's Economic Regulation Group (ERG) is responsible for the economic regulation of UK airports, air traffic services and airlines. This regulation takes a number of forms, including the setting of price controls for four UK airports and for the 'En Route' business of NATS¹¹. The vast majority of the UK's commercial airports are not subject to ex ante economic regulation¹². In addition, the CAA's economic regulation of airlines is increasingly limited in nature, reflecting the liberalisation in the UK's main international markets.
- 1.5 ERG also acts as expert adviser to the Government and collects, analyses and publishes statistical information on airlines and airports. Annex A provides additional information about the statistical information held by the CAA.

Scope of this response

- 1.6 The CAA has sought to limit the scope of this submission to the key features it considers bear on the nature of, and scope for, competition between UK airports. Reflecting the current stage of the Market Investigation, the CAA has not sought to reach a view on the question posed by the OFT. This submission does not consider the issue of remedies, structural or otherwise.
- 1.7 The views expressed by the CAA in this submission reflect the evidence collected and analysis undertaken by the CAA for its various regulatory functions, and

¹⁰ CAA presentation to the CC, 27 April 2007.

¹¹ NATS has a statutory monopoly for the supply of 'En Route' air traffic control (the higher altitude, national air traffic control). NATS also supplies air traffic services to a number of UK airports, who can use alternative suppliers. This business is not subject to economic regulation by the CAA.

¹² The Secretary of State for Transport determines which UK airports are 'designated' for price control by the CAA.

references to supporting documents are included where appropriate. However, this submission does not include any substantive quantitative analysis.

- 1.8 The CAA can provide additional analysis and evidence where the CC considers that such information would be useful.

Other relevant CAA publications on airport competition

The analysis of competitive constraints faced by Manchester and Stansted airports

- 1.9 The CAA has undertaken a detailed analysis of the competitive constraints faced by Stansted¹³ and Manchester¹⁴ airports, in order to inform its approach to setting price controls for these two airports. Much of this analysis is likely to be relevant to the CC's Market Investigation.
- 1.10 However, it should be noted that the CAA's analysis of Stansted Airport is somewhat different from that presented by the OFT in their Market Study report, reflecting the different issues under consideration. For example, the CAA's analysis assumes that the current ownership of BAA's airports continues, and that Heathrow and Gatwick remain subject to price controls. The CAA's analysis of Stansted does not, therefore, consider the scope for additional competition between BAA's airports, nor depend upon it.
- 1.11 The OFT's market definition placed less weight on the impact of airports outside of the London area than the CAA, which proposed a market definition for Stansted Airport that included a number of smaller airports in the South East and also a number of airports located outside the South East planning district. The CAA considers that this difference can be explained by differences in the issues being considered by the CAA and the OFT, in addition to the fact that the relative importance of various competitive constraints will vary depending upon whether competition is being assessed in relation to an individual airport (and, of course, which airport) or the BAA group of airports. In particular, Stansted Airport is more likely to face material competitive constraints from airports located to the north and northwest of London than, say, Gatwick, whilst airports to the southwest and west of London are less likely to be relevant to understanding the competitive constraints faced by Stansted Airport.

Other CAA publications

- 1.12 In addition to its market analysis of Stansted and Manchester airports, the CAA has published a number of reports that might be relevant to the CC's analysis of the UK airports market.
- **'Demand for outbound leisure air travel and its key drivers'**¹⁵
This report documents the findings of research undertaken by the CAA on the

¹³ 'Initial price control proposals for Heathrow, Gatwick and Stansted airports: Supporting Paper II – Competitive constraints faced by Stansted Airport', CAA, December 2006.

¹⁴ See Annex A of 'Manchester Airport price control review – policy consultation', CAA, January 2007.

¹⁵ CAA, December 2005, <http://www.caa.co.uk/docs/5/Elasticity%20Study.pdf>

factors influencing demand for outbound leisure air travel in the UK. It sets out the facts on, and the latest analysis of, how changes in income, wealth, airfares and the composition of the population affect demand for leisure air travel in the UK. The research is based on: interviews with industry representatives; econometric estimation of demand elasticities; and a stated preference survey of passengers at Stansted Airport.

- **‘UK regional air services – a study by the CAA’¹⁶**
This study paints a broad picture of the development of UK regional air services over the last 10–20 years, examining emerging trends and drawing some conclusions. It is based on statistical data collected routinely by the CAA from UK airlines, airports, passengers and on interviews with representatives of regional airlines, airports and regional bodies. The CAA intends to publish an update to this study during 2007.
- **‘No frills carriers: revolution or evolution?’¹⁷**
This report aims to set the “no-frills revolution” in context, to understand better the impacts it has had on the sector, on infrastructure and on the public, and to reflect on those issues that seem most relevant to the current state of the UK aviation sector and likely future trends. The study also explores the extent to which the common perception of the impact of the no-frills “revolution” is borne out by the available evidence on the UK market.
- **‘Competition issues associated with the trading of airport slots’¹⁸**
This paper was prepared by the OFT and CAA to assist discussion on the proposal for introducing market mechanisms for allocating airport slots. While the Department for Transport is the UK lead respondent to DG Tren on these issues, they requested that the OFT and CAA examine whether any competition issues arise.

1.13 The CAA also intends to publish a study of long-haul airline markets later this year.

Structure of this paper

1.14 The remainder of this submission is structured in three chapters. Chapter 2 discusses the economics of airports and the way that airport competition is affected by the characteristics of passengers and airlines. Chapter 3 considers the potential impact on airport competition of BAA’s ownership of airports in the South East of England and in Scotland. Chapter 4 presents a summary of the current framework of economic regulation of UK airports and considers the potential impact of the various features of the current regulatory framework.

1.15 This paper also includes one annex, that sets out the data held by the CAA on UK airports, airlines and passengers.

¹⁶ CAA, February 2005, <http://www.caa.co.uk/docs/33/CAP754.PDF>

¹⁷ CAA, November 2006, <http://www.caa.co.uk/docs/33/CAP770.pdf>

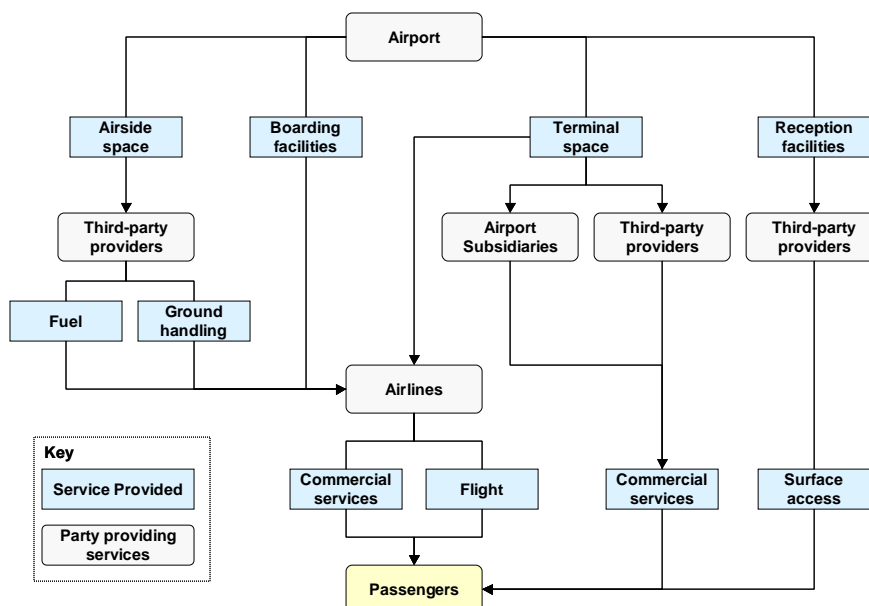
¹⁸ Joint OFT-CAA paper, June 2005, <http://www.caa.co.uk/docs/589/oft832.pdf>

2. Factors affecting airport competition

- 2.1 This chapter discusses the economics of airports and the way that competition is affected by the characteristics of airlines and passengers. In particular, it sets out that airport competition is not determined exclusively by either passengers or airlines, as either or both may affect competition. It also discusses the importance of considering the full range of potential sources of airport competitive constraints. These can range from the potential for passengers and/or airlines to switch to alternative local airports to the potential for airlines to relocate their business (or their future growth plans) to airports within the European Aviation Area (or further afield).
- 2.2 This chapter is structured in four main sections, discussing:
- the airport supply chain;
 - airport cost and revenue characteristics;
 - airline economics; and
 - passenger characteristics.
- 2.3 This is followed by a discussion of the potential implications for reaching a relevant airport market definitions and for airport competition assessment – two factors that will be addressed by the CC as part of its market investigation.

The airport supply chain

- 2.4 Airports provide service to passengers and airlines. But they also interact with other undertakings including providers of retail services within the terminals and ground-handling agents. The figure below illustrates the various interactions between an airport, its customers, and other undertakings for commercial passenger flights.

Figure 2-1 Illustrative supply chain for passenger air transport

Source: CAA

- 2.5 The demand for airport services comes from airlines that in turn respond to the demand from passengers (and freight shippers) for air travel to destinations they require. Passengers will only use an airport if there is a suitable service offered by an airline, whilst airlines will not find it profitable to offer services to/from an airport unless there are sufficient passengers willing to use it at an appropriate price.
- 2.6 The competitive constraints faced by an airport will therefore depend upon the cost and revenue characteristics of airport operation, as well as the characteristics of airlines and passengers – how they interact and how they respond to changes in prices and/or quality of service offered by the airport.

Airport cost and revenue characteristics

- 2.7 Natural monopoly businesses enjoy economies of scale that make it impossible for meaningful competition to emerge (i.e. they face declining average cost over all volumes of output). The designated UK airports have often been thought of as possessing natural monopoly characteristics. But airports often do not exhibit the underlying cost characteristics associated with natural monopolies. Rather, they can face increasing, not decreasing, long-run costs (potentially from quite moderate levels of output) as a result of scale diseconomies.
- 2.8 Once an airport operator has invested in the necessary runway, terminal and airfield assets (sunk costs) required to accommodate passenger services, a profit maximising operator will face strong incentives to maximise use of its available capacity and grow its business. These incentives arise as, in the short-run, the growth achieved is likely to be accompanied by declining average cost, due to the existence of economies of scale¹⁹. However, over time, with increased throughput, the airport operator will eventually start to run-up against capacity bottlenecks. To

¹⁹ Greater passenger and/or cargo throughput can be achieved through increased utilisation of the existing assets, whilst few incremental capital or operating costs are incurred.

increase capacity further, an airport operator might then need to undertake incremental terminal or runway investment (such as the addition of taxiways) or deploy additional staff to increase existing terminal throughput. As such, overall costs will start to rise, potentially pushing up average costs.

- 2.9 Airports are likely to reach a point, eventually, when the next increment of capacity is most efficiently provided by a relatively large (lumpy) increment of investment, for example in a new terminal building or the addition of a substantial satellite to an existing terminal building or new runway. The supply-demand balance in the run up to a significant increment in capacity is likely to result in upward pressure on airport charges reflecting the scarcity of available capacity. With the delivery of new capacity, the supply-demand balance is likely to change resulting in downward pressure on airport charges. As a result airport charges may vary considerably over time: falling following investment and rising as capacity fills up²⁰.
- 2.10 As a result of their past public / military ownership, many UK airports started life in the private sector with an endowment of a runway, and in many cases existing terminal assets (or airfield hangars capable of being turned into passenger facilities through small incremental investments). The sale of these assets into private hands has served to ease barriers to market entry and facilitate the efficient expansion of airport capacity to meet demand. Robin Hood Doncaster Sheffield and NEMA are good examples of airports that have undergone a change of use from public / military to commercial operation and ownership. They and the majority of the UK's regional airports are likely still to be in a position where they face declining average costs of production – increasing the strength of the competitive constraint they place on larger airports.
- 2.11 In the short and medium term the capacity available to airlines and the service provided to passengers – and therefore the nature of airport competition – will, in large part, be determined by airports' previous investment decisions. However, over the longer term the potential exists for airports to compete to supply new capacity to the market at the right time, in the right airport, and appropriately specified. This is discussed in more detail in chapter 3.
- 2.12 In terms of their costs characteristics, airports are likely therefore to have more in common with container ports and energy generation businesses rather than infrastructure networks such as energy distribution or water and sewage businesses. This is not to say that airports cannot possess very substantial market power, but that the source(s) of this power will arise from areas other than economies of scale (unlike other price regulated utility businesses). Airport market power will instead be related to the extent of competitive constraint faced that will arise in respect of the:
- existence of viable substitutes for passengers and/or airlines;

²⁰ The cyclical nature of airport charges described here may be ameliorated by the application of long-term contracts between the airport and airlines.

- fixity of locational inputs (i.e. barriers to new entry, such as the limited availability of suitable sites for new airports²¹);
- barriers to airline switching (including the economies of scope associated with airline network operations); and
- barriers to passenger switching.

2.13 At regional airports, generally, there has been recent evidence that airports can and do compete by successfully attracting passengers and airlines with the result that UK regional airports have experienced rapid growth in their businesses. The CAA has considered the degree to which airports interact as part of its supporting analysis for the current price review of designated airports and has concluded that there are material interactions between the larger London airports and a number of regional airports, including Birmingham International and East Midlands. Furthermore, the OFT also cited evidence that Glasgow and Prestwick airports compete for passengers and airlines.

2.14 Relative to a business with a high degree of variable costs, airports are likely to have less incentive to raise prices and/or limit supply to the market because lower traffic volumes will have a greater impact on their profitability. This is because a significant proportion of the costs incurred by an airport do not vary with traffic volumes; once constructed, the costs of terminals and runways are sunk and fixed, and the operating and security costs of an airport will not vary significantly with passenger numbers over the short term.²² However, an airport's revenue from aeronautical charges typically varies with traffic volumes (as charges are often set as a combination of per passenger and per ATM charges). Further, airport revenue from commercial activities, such as car parking and retail commissions, will usually also vary with traffic volumes.

2.15 The combined effect of sizeable fixed costs and significantly variable revenues is that the net revenue (or "contribution") associated with each passenger is large relative to a business with costs and revenues that both vary with output. For airports, therefore, pursuing a strategy of restricting traffic volumes to raise prices above the competitive level, is likely to have a significant effect on their bottom-line as the profit foregone on each passenger lost is larger than in less capital-intensive industries. A consequence of these cost and revenue characteristics is that the behaviour of airlines and passengers at the margin may serve significantly to affect the profitability, or otherwise, of an airport strategy that seeks to increase charges.

²¹ Barriers to entry might include the ability to obtain a suitable location for facilities, the cost of these facilities, the ability to secure suitable planning consent and the availability of the necessary airspace.

²² Over longer time periods more fixed costs will become variable. So, for example, an airport that adds significant numbers of passengers would be expected to face an increase in security costs.

Implications

2.16 In summary:

- UK airports can (and do) compete; they do not appear to enjoy the cost characteristics (declining average costs over all relevant volumes of output) associated with natural monopolies.
- Airports' incentives to restrict output below and raise prices above (or to reduce quality below) the competitive level (at least between the introduction of large tranches of capital) are muted by the loss of commercial as well as aeronautical revenues. The behaviour of airlines and passengers at the margin can therefore have a significant impact on airport profits.

Airline economics

2.17 Airports provide services to a number of different airline business types (cargo and passenger) that adopt a range business models reflecting different passenger and freight requirements. Airlines will place different relative values on elements of airport infrastructure. So, depending on the purpose of the analysis, it may be necessary to distinguish between the provision of airport infrastructure to different airline types. Airlines are commonly categorised as follows:

- **Point-to-point**
These airlines sell tickets for travel between two airports that are served by a single flight (i.e. without landing at any intermediate airports). Whilst some passengers might choose to buy several tickets in order to travel between airports that are not served by direct point-to-point services, these airlines do not tend to provide support for these "interlining" passengers (such as the through-checking of baggage).
- **Network carriers**
These airlines operate a network of domestic, short-haul and long-haul routes, usually focussed on one or more 'hubs', in order to allow significant numbers of passengers to travel between a large number of airports. Network carriers typically offer services to facilitate the transfer of passengers between flights, such as the coordination of their schedules and issuing tickets covering a number of individual flights. However, network carriers will also tend to fly a large number of passengers on a 'point-to-point' basis.
- **All inclusive tours (charter carriers)**
These airlines focus on providing flights to leisure passengers as part of a holiday package.

2.18 The airline market is dynamic and has seen significant evolution in terms of airline business models and route networks over the last decade, notably with the emergence of no-frills carriers²³. However, there has also been some significant

²³ 'No-frills Carriers: Revolution or Evolution?', CAA, November 2006

blurring in the traditional distinctions between the new entrant “no-frills” and incumbent airlines and between scheduled point-to-point and charter operations. For example, BA has recently adopted a “no-frills” fares structure on its short-haul routes, whilst easyJet now offers a number of services (for example, fixed price flexible fares, optional business lounges, flexible departure times, priority boarding etc) including, on certain routes, high frequencies and departure schedules that are designed to appeal to business traffic more usually associated with full-service incumbents. A number of charter carriers have also adapted their business models and now sell tickets on a “seat only” basis. More recently, long-haul point-to-point dedicated business carriers have entered the market at Luton and Stansted serving a segment of passengers previously the domain of formal network businesses.

2.19 Airlines may find it profitable to respond to the conduct of an airport by:

- switching (or threatening to switch) some of their existing services to alternative airports;
- switching growth in services to alternative airports; or
- curtailing their growth plans altogether.

Alternatively, airlines may not find it profitable, or might be unable, to respond.

2.20 The incentive for, and ability of, airlines to switch existing services, or divert growth, to other airports will vary by carrier type. No-frills carriers, with rapidly growing route portfolios and flexible business models, are likely to face lower costs from diverting growth or even switching some of their existing services (at least at the margin) away from airports. Airport charges will also represent a relatively more significant proportion of their ticket price. The CAA’s Regional Air Services report noted that no-frills carriers regularly compare route development options across a range of airports within the single European market.

2.21 Long-haul carriers, particularly those that rely on a high proportion of connecting traffic, are likely to be the least responsive to changes in airport charges, for at least two reasons. First, airport charges will represent a relatively small proportion of their costs and the ticket price, reducing the impact of any cost increase. Second, to a greater or lesser degree, the profitability of their point-to-point long haul services may rely on (or be related to) the availability of short-haul feed traffic at their base airport. The required density and type of this feed traffic may not be available at many alternative airports. However, the growing short-haul traffic density associated with no-frills carriers at certain secondary airports in the UK and Europe may increase the options available for airlines to develop long-haul point-to-point services from other bases²⁴.

2.22 Whilst the competition for airline business appears to be most intense between neighbouring airports, there also appears to be some competitive tension between

²⁴ In 2005, 11 per cent of passengers using Stansted are connecting between flights despite the fact that few of the airlines at the airport offer support (such as baggage transfers or coordinated timetables) to these passengers.

airports across the European Single Market as they compete against each other to win business from airlines with capacity to place.

- 2.23 Airlines would incur some cost from the relocation of aircraft to other airports within the UK or Europe (and potentially higher costs if they were to consider moving their entire operations away from an airport). However, the cost and revenue characteristics of airports – discussed in paragraphs 2.7 to 2.15 – may constrain excessive increases in charges and drive competitive pricing.

Implications

- 2.24 In summary:

- Airlines might face competitive pressure from a number of sources, including:
 - other airlines at their chosen airport;
 - services offered from by other airlines at neighbouring airports serving similar population centres or leisure destinations;
 - services provided by competing network carriers, at other ‘hub’ airports; and
 - other forms of leisure spending.
- The impact of airport charges on passengers will vary by carrier type with airport charges representing the greatest proportion of the ticket price for no-frills carriers and the least for long-haul carriers. Airports will face more significant competitive constraints where airlines and passengers can switch away.
- Some airlines have many alternative uses for their assets: no-frills carriers have demonstrated an ability to compare route options across the single European market.
- Other airlines with interconnecting passengers, such as airlines operating at hub airports, may be less able to switch away from those airports.
- Airline switching / route closure is likely to affect passenger numbers. Therefore airline conduct will matter to airports.
- Airline offerings affect the appeal of the airport, particularly for passengers with a specific destination or time of travel in mind.

Passenger characteristics

- 2.25 The response of passengers to changes in the level of airfares or service quality at an airport will also have the potential to discipline an airport’s conduct. Passengers’ responses are likely to be closely related to airlines as, if significant numbers of passengers are expected to respond to a change in airport charges (via the impact

on air fares) or in the level of airport service quality, this could encourage airlines to change their services and/or relocate services to alternative airports. Similarly, where airlines choose to relocate some of their services, this may encourage passengers to use alternative airports, attracted by the nature of the airline services and/or the routes now offered there.

2.26 In common with the discussion of airline characteristics, passenger characteristics will vary. So, depending on the purpose of the analysis it may be necessary to distinguish between the use of airports by different passenger types.

2.27 Passenger characteristics will be driven by their motivation for undertaking their journey. Passengers are commonly classified into the following groups:

- business;
- Visiting Friends and Relatives (VFR); and
- other leisure.

2.28 Passenger behaviour will in turn be driven by their preferences for (or the value placed on) different aspects of air travel, notably:

- destination choice (and the availability of alternatives);
- proximity of the airport and the choice and reliability of available surface access transport options;
- convenience of available travel time(s);
- choice of alternative travel times / flight frequency;
- flexibility and risk of delay / cancellation;
- level of service²⁵ provided (by both the airport and airline); and
- price.

2.29 Some of these factors can be affected by the airport's conduct, whilst others will be affected by airlines.

2.30 Passengers with different journey purposes are likely to have different preferences between the above factors and to place a greater / or lesser weight on different groupings of them. For example, business passengers will tend to be more time-sensitive than leisure passengers and therefore place a higher value on surface access time and available flight frequency. They also tend to require a specific destination and be less sensitive to the price of the ticket than leisure passengers.

²⁵ Service quality has a number of different characteristics. As a result there is no simple relationship between the range and quality of individual services provided by an airport and the value that passengers place on the bundle of services received. For example, passengers using smaller airports, with a more limited range of "services", might consider that the overall level of service received is better than at a larger airport.

Some leisure passengers will, by contrast, be flexible about their destination or time of travel and may treat holidays involving air travel as only one of many potential leisure activities on which to spend their income.

Implications

2.31 In summary:

- Passengers are likely to have different preferences that may generate varying responses to price changes, and bear on the relevance of potential substitute airports (i.e. on the potential for passenger switching between airports).
- Variation in passenger preferences, in particular the value placed on time and responsiveness to changes in airfares (i.e. the price elasticity of demand), provides an incentive for an airport to implement price discrimination. However, the indirect nature of the relationship between passengers and airports may limit the degree to which an airport is able to do this in practice, particularly in relation to the origin and/or destination of passengers.

Impact on market definition and competition assessment

Market definition

2.32 The discussion above suggests that defining an airport's relevant geographic market(s) will need to balance a number of interrelated issues. The CAA has sought, therefore, to avoid characterising the market as one in which airport competition is determined exclusively by either passengers or airlines in isolation. Rather, either or both may affect competition. This is not to say that airports play a passive role in the competitive process. Airports can influence passenger and/or airline decisions by offering a different mix of price and service quality in order to attract (new or existing) traffic away from rival airports, increasing the strength of competition between the airports.

2.33 At a general level, an airport's geographic market may be *broadened* by factors such as:

- the inability to identify passenger location and therefore to price discriminate effectively;
- a cost and revenue structure which increases the importance of decisions made by marginal passengers and airlines;
- where services to certain destinations are only offered at larger airports, particularly where passengers have strong preferences for these destinations;
- where an airport is used by network carriers with a significant proportion of interlining traffic; and

- where strong catchment overlaps result in a chain of competing airports²⁶.
- 2.34 There are also countervailing factors that may serve to support a narrower market definition, for example:
- the small proportion of the ticket price that airport charges constitute; and
 - the more significant switching costs faced by some airlines that limit their ability to switch to alternative airports.
- 2.35 The relevant market definition(s) is also likely to vary depending upon the airport(s) being considered and the purpose of the analysis. For example, the OFT's analysis of BAA's group of London airports adopted a South East and East Anglia geographic market as this appeared to capture the majority of the issues of concern to the OFT. However, an analysis of the competitive constraints affecting each of the airports *individually* (e.g. were they to be in separate ownership) would be likely to require a differentiated approach for each airport, reflecting their geographic locations with respect to London and the differences in the types of carrier and the characteristics of the passengers using the airports.

Competition between airports in the short / long term

- 2.36 The long-lived nature of airport assets implies that any competition assessment must take into account the potential competitive dynamics over a relatively long period. Airport investment in large-scale sunk assets can be expected to frame competition for many years. However, airports can often expand capacity in an incremental manner, as has occurred at many UK airports. As a result, any competition assessment may need to take account of different considerations when looking at the intensity of short and long-term competitive constraints.
- 2.37 As discussed above, airport economics imply that airport competition is possible – airports do not share the underlying cost characteristics of natural monopoly businesses – and there is a range of evidence that airlines located at different airports compete, which results in the potential for competitive constraints to exist between airports. Examples of such short-term competition include:
- strong evidence of fares correlation between airlines located at Luton and Stansted;
 - strong route overlaps and competition for passengers within the London population centre by airlines at Luton-Stansted-Gatwick; and
 - competition in specific sectors between carriers based at Heathrow, and those at other London airports particularly for domestic and short-haul traffic (e.g. easyJet-BA).

²⁶ For example, if Birmingham and Manchester compete for passengers and/or airlines and the same can be said of Birmingham and Luton then it would be reasonable to conclude that Manchester and Luton are indirectly linked by the common competition with Birmingham airport.

- 2.38 In addition, there are a number of instances of airlines switching routes, and/or their growth plans, between airports. For example, Ryanair relocated its main base from Luton to Stansted and has previously demonstrated an ability to switch routes between airports.
- 2.39 As such, it is possible that even Heathrow faces competitive constraints. It has a very strong position gained from its proximity to, and strong transport links with, London (a very dense population centre with significant economic activity), its use by network carriers as a base airport and rich long-haul route network. But the growth of direct services (both short- and long-haul) from UK regional airports, the evidence of increasing competition for domestic and short-haul traffic between airlines at Heathrow and at other airports serving Southern England, and the potential competition for interlining traffic from other European and more distant hubs suggest that it is likely to face some competitive constraints.
- 2.40 As regards competition over the longer-term, the DfT's and BAA's modelling of passenger demand and capacity requirements at the London airports recognises the interactions between capacity provision at the London airports. Obviously planning law and government policy – discussed in chapter 4 – will have an impact on the intensity of this form of competition.

Conclusion

- 2.41 The extent to which an individual airport faces significant competitive constraints is an empirical question. The answer is likely to be a matter of degree based on a balanced judgement from a range of evidence (which may differ by airport).
- 2.42 This chapter has shown that a number of factors can affect airport operation and therefore that the nature and degree to which airports face competitive constraints will differ according to the type of airlines and passengers using the airport and the nature of the interrelationships between them.
- 2.43 It is important to avoid characterising the nature of airport operation and airport competition as being determined exclusively by either passengers or airlines in isolation, as either or both may affect competition. Similarly, the practical barriers to price discrimination mean that an analysis of the airport's geographic market needs to assess the competitive constraints prevailing from passengers in the airport's local market, those further afield, and, importantly, the interaction between these two groups of passengers.

3. BAA's joint ownership of airports

- 3.1 The OFT stated, in their April 2007 report²⁷, that they had “found potential adverse effects relating to a combination of features: joint ownership (with very high regional market shares), regulation, development restrictions and capacity constraints”. This chapter focuses on the first of these factors.
- 3.2 In respect of BAA's joint ownership of airports, the OFT highlighted a number of issues, including the effect of joint ownership on competition between the airports in the short run and in the long run. In respect of the latter, the OFT highlighted the potential impact of joint ownership on investment incentives.
- 3.3 In this document the CAA has not presented, nor has it undertaken, a detailed assessment of the extent to which BAA's joint ownership of UK airports constrains the degree of competition between airports. As highlighted by the previous chapter, there are a number of features of airports that make such analysis relatively complicated. It follows that judgements on this question should follow careful analysis of these features and the interactions between them.
- 3.4 Against this background, the CAA has focused its initial analysis on two related questions:
- What constraints might be expected to bear on the assessment of the degree to which BAA's airports might compete under separate ownership?
 - What effects (both positive and negative) might be expected to arise in the event that BAA's airports were no longer jointly owned?
- 3.5 Reflecting the above, this chapter is structured in four main sections. The first sets out the factors that might bear on the extent to which BAA's airports could be expected to compete under separate ownership. The second and third set out the factors that are relevant to any assessment of the potential benefits and potential costs of such a separation. The final section briefly considers the issue of how to deal with the uncertainty associated with such an assessment.

Scope for competition between airports

- 3.6 BAA's airports are used by a relatively large proportion of passengers travelling by air in the UK. As highlighted by the OFT, their share of passengers travelling in the southeast of England and in Scotland is particularly high. BAA has retained a high and relatively stable share of the UK airports market with BAA's share of UK air passengers falling over time from 71 per cent in 1991 to 62 per cent in 2006.
- 3.7 Furthermore, the physical characteristics of airports, their scale and environmental impact, tend to militate against the creation of entirely new airports, particularly in densely populated areas. When combined with the fact that the government has offered its support to the construction of additional runways at Stansted and

²⁷ 'BAA: the OFT's reference to the Competition Commission', OFT, April 2007

Heathrow, this increases the likelihood that BAA will retain a strong market position, particularly in the southeast of England where the barriers to developing additional airport capacity are most marked.

Constraints on the degree of competition

- 3.8 Whilst BAA has, and appears likely to retain, a strong market position in the southeast of England and in Scotland, this observation is not, in itself, sufficient to conclude that BAA's joint ownership of airports limits competition. To make such an assessment it is important to understand the degree to which these airports, in particular circumstances and geographic positions (as opposed to generally), might compete were the structure of the market modified.
- 3.9 In general, there is considerable evidence that airports can, and do, compete for passengers and for airline business. However, there are a number of features of the airport market in the southeast of England that might significantly constrain the degree to which airports effectively compete and, therefore, potentially limit the benefits that might normally flow from a reduction in market concentration.
- 3.10 The CAA considers that it is useful to consider the extent to which airports can compete over the short-term (through price, service quality and incremental investment) and over the long-term (through investment in large-scale additional capacity), whilst also recognising that the nature of competition in the short-term is substantially determined by past investment decisions. It is also likely that the relative importance of these two aspects will differ between BAA's airports in Scotland and those in the southeast of England, where the issue of capacity expansion (and thus of the potential for meaningful competition in the long-term) represents a more significant determinant of outcomes for consumers.
- 3.11 Chapter 2 of this document set out the factors that the CAA considers important in any analysis of the actual or potential competitive constraints facing airports, highlighting the importance that airline *and* passenger characteristics will have for airport competition. The following sections of this chapter provide a summary of the factors that the CAA considers are relevant to assessment of the potential for additional competition between BAA's airports located around London (i.e. Heathrow, Gatwick and Stansted) and in Scotland (i.e. Aberdeen, Edinburgh and Glasgow).

BAA's London airports

Overlapping passenger catchment areas

- 3.12 In terms of understanding whether BAA's London airports might be able to compete with each other, it is useful to consider the extent to which their 'catchment areas'²⁸ overlap. Where such overlaps are significant, the potential exists for passengers to view the relevant airports as substitutes. It is useful, in this context, to consider the

²⁸ An airport's catchment area is the geographic area from which a high proportion of its passengers tend to originate from. There is no widely accepted definition of an airport's catchment area and, reflecting this, there are a number of different methods of representing the catchment area of an airport.

degree to which BAA's London airports serve passengers from the Greater London metropolitan area – with its very high population density and relatively high propensity to travel by air.

- 3.13 BAA's three London airports, particularly Heathrow, benefit from relatively good links to surface transport networks. Heathrow, Gatwick and Stansted are 16, 30 and 35 miles respectively²⁹ from central London. Train times from central London vary from 15 to 45 minutes, with Heathrow benefiting from a connection to the London Underground network and the fastest train connection, via the Heathrow Express. The three airports are also located close to the national motorway network.
- 3.14 Analysis undertaken by the CAA³⁰ highlights that many passengers travel up to two hours to reach their chosen airport, although certain categories of passenger (such as business and domestic travellers) travel for less time on average. As a result, it appears that BAA's London airports are well placed to serve passengers located over large areas of the Greater London area. Indeed, CAA data suggests that there are considerable overlaps between the catchment areas of these three airports, an observation that is consistent with the analysis presented by the OFT³¹.
- 3.15 It should also be noted that there is considerable evidence to suggest that BAA's London airports also interact with other London airports, namely Luton and London City, as well as a number of other airports located outside of the South East planning area. For example, of passengers not connecting at Heathrow, 18 per cent originate outside this planning region, whilst over 40 per cent of passengers originating from each of the South West and East Midlands planning regions travel using one of the London airports. In addition, a significant number of passengers connect between flights at London airports (particularly at Heathrow, where 35 per cent of passengers using Heathrow are connecting between flights).

Passenger information and ability/willingness to switch between airports

- 3.16 A notable feature of the UK aviation market is the growing use of the internet³² to book flights³³ and the development of a number of independent price comparison websites that draw together fares from a number of airlines and, in some cases, across a number of origin and/or destination airports³⁴. This development is likely

²⁹ Approximate driving distances are taken from Charing Cross station, using www.theaa.co.uk.

³⁰ 'Initial price control proposals for Heathrow, Gatwick and Stansted airports: Supporting Paper II – Competitive constraints faced by Stansted Airport', CAA, December 2006.

³¹ See, in particular, paragraphs 3.15 to 3.61 of 'Initial price control proposals for Heathrow, Gatwick and Stansted airports: Supporting Paper II – Competitive constraints faced by Stansted Airport', CAA, December 2006.

³² Figures for April 2006 from National Statistics (www.statistics.gov.uk) show that 57 per cent of households in Great Britain have access to the internet (a five per cent increase on the previous year) with the figure rising to 66 per cent for the South East of England. Other passengers might, of course, be able to access the internet through internet cafes or at work.

³³ For example, Ryanair and easyJet book in excess of 95 per cent of their seats via the internet (source: company websites).

³⁴ For example, www.skyscanner.net enables customers to search for the cheapest fares across a range of destinations, dates and departure airports. Similar sites include www.opodo.com, www.travelsupermarket.co.uk and www.lastminute.com.

to have significantly reduced passenger search costs and facilitated comparison of competing offers.

- 3.17 In addition, survey evidence³⁵ collected by the CAA also shows that a significant proportion of passengers using the four major London airports have previously used other airports, suggesting an ability to switch between airports (should a suitable service be available). The CAA has also presented evidence that supports the view that some passengers are willing and able to switch between different destinations³⁶.
- 3.18 Approximately 40 per cent of routes offered at the London airports are available at least at one other London airport which, due to there being more overlaps on more popular routes, results in approximately 70 per cent of passengers travelling to destinations that are offered from multiple London airports³⁷. In addition, some passengers will be prepared to switch between different destinations³⁸. However, some passengers, such as business and VFR, will be less able and/or less willing to switch between destinations and/or between airports.

Competition between airlines located at different airports

- 3.19 The nature and extent of competition between airlines can be useful in assessing competition between airports. First, one source of competitive interaction between airports is the degree of competition between airlines located at these airports for passengers. Second, evidence of competition between airlines at different airports can also provide useful evidence on the potential for the airports to compete in other ways, as such competition indicates that some passengers view the airports as reasonable alternatives.
- 3.20 Reflecting the ability of significant numbers of passengers to compare alternative offers and to switch between airports and airlines, there is evidence that airlines located at different London airports compete for passengers. For example, BAA commissioned work from NERA that considered the extent of interactions between the four major London airports³⁹. The CAA also undertook statistical analysis of the impact of route overlaps on airfares. The results of both of these pieces of analysis are consistent with the view that these interactions are material.
- 3.21 The CAA has also considered the impact of new entrant no-frills airlines on the incumbent airlines in its study into the impact of No-Frills Carriers (NFCs)⁴⁰. This study highlighted that incumbent airlines have responded by adopting some of the business practices of NFC operations. For example, in recent years British Airways

³⁵ In particular, see Figure 3-13 of 'Initial price control proposals for Heathrow, Gatwick and Stansted airports: Supporting Paper II – Competitive constraints faced by Stansted Airport', CAA, December 2006.

³⁶ For example, see Figure 2.20 of 'No-frills Carriers: Revolution or Evolution?', CAA, November 2006

³⁷ Source: CAA airport statistics. This analysis was undertaken on the basis of airport pairs. Where a destination is served by multiple airports this will tend to under-state the degree of overlap.

³⁸ For example, some passengers may have strong preferences to visit a 'sun' destination but have relatively weak preferences between these types of destination.

³⁹ The CAA presented a summary of the BAA/NERA analysis, together with analysis undertaken by the CAA, in paragraphs 4.14 to 4.24 of 'Initial price control proposals for Heathrow, Gatwick and Stansted airports: Supporting Paper II – Competitive constraints faced by Stansted Airport', CAA, December 2006.

⁴⁰ 'No-frills Carriers: Revolution or Evolution?', CAA, November 2006

has changed its fare structure (adopting a one-way pricing structure), increased the profile of its internet booking facilities and restructured its domestic operations (prior to the sale of the majority of this business). Indeed, short-haul fares paid by leisure passengers at Heathrow fell by over 40 per cent between 2000 and 2005⁴¹.

- 3.22 At the same time, some airlines have sought to attract traffic away from the incumbent, 'full service', carriers. As discussed in chapter 2, this has been associated with a blurring in the boundaries between airline business models. For example, easyJet has recently focused on boosting frequency on key short-haul destinations from Gatwick, Luton and Stansted as well as offering some optional "frills" (such as priority seating). This has formed part of the airline's stated strategy of attracting passengers, and particularly higher-value business passengers, away from 'traditional' carriers at Heathrow.

Airport capacity constraints in the short term

- 3.23 In the short term, the nature and extent of competition between airlines across the London airports, and between the London airports and other UK airports, is affected by the availability of airport capacity at these airports.
- 3.24 As noted in Chapter 2, an airport's ability to accept additional services can be constrained by the availability of airspace, runway, stand and/or terminal capacity⁴². Such constraints might apply at certain times of the day, at certain times of the year or to certain types of aircraft⁴³. Airport capacity is typically referred to in terms of the "slots" made available to airlines.
- 3.25 All the major airports in London experience some capacity constraints. Heathrow experiences considerable capacity constraints with almost all slots already allocated to airlines. At Gatwick, the most intensively used single-runway airport in the world, capacity constraints limit the availability of additional slots in many peak periods, although there is some capacity at certain off-peak periods. Stansted and Luton airports are less constrained than these two airports, although Stansted has no unallocated slots at certain peak times of the day and Luton has limited availability of aircraft stands.
- 3.26 As discussed in chapter 2, some capacity constraints are easier to resolve than others. Incremental additions to capacity can often be achieved without very significant additional capital expenditure (relative to the cost of the existing assets)⁴⁴. However, larger airports often reach a point where expansion becomes both significantly costly and difficult to undertake in an incremental manner. Stansted's proposed second runway is an example of such a large 'lumpy' development (with an estimated cost of around £1.5bn for phase one to deliver capacity for up to 10 million additional passengers), which contrasts with the same airport's plans to deliver earlier incremental capacity enhancement to its existing runway through the addition of terminal space, stands and taxiways (with an

⁴¹ Source: CAA survey data (unadjusted for any changes in average flight distance).

⁴² Or cargo reception facilities in the case of cargo operations.

⁴³ For example, there might be a limit on the suitable aircraft stands for larger aircraft.

⁴⁴ For example, additional taxiways, aircraft stands and certain terminal developments.

estimated cost of around £0.5bn to deliver capacity for up to 10 million additional passengers)⁴⁵.

32. As in many other markets, as infrastructure becomes more intensively used, and capacity constraints become binding, the value of access rights (in this case slots) tends to rise. This can put upward pressure on airfares and increase the cost of entry in the relevant airline markets. However, this may not be sufficient to conclude that slot constraints prevent, restrict or distort competition. A well-functioning market that involves significant investment in sunk infrastructure will tend to exhibit periods where capacity is relatively unconstrained – with access (slot) prices and airport returns that are relatively low – followed by periods where capacity is more constrained – with access (slot) prices and airport returns that are relatively high.
33. Whilst it seems likely that airports with spare capacity compete more actively for airlines and passengers, it should also be noted that airports with low levels of slot availability might still be capable of supporting airline entry and/or passenger growth and, therefore, compete with other airports. In addition, airlines can redeploy slots between routes and can, particularly over longer timescales, employ larger aircraft. Further, where airlines are permitted to trade slots on the secondary market, more airlines that use slots more efficiently may be able to acquire suitable slots from incumbent operators that use them less efficiently. However, the potential impact of these factors may be more limited at highly constrained airports such as Heathrow, where the average aircraft size is already significantly above that at other airports, where there are very limited numbers of slots and the prospects for incremental capacity expansion are limited.
34. Overall, therefore, the cost and difficulty associated with airport expansion in the southeast is likely to mean that capacity constraints will affect the degree and nature of airport competition in the short-term and long-term.

Prospects for airport expansion (in the longer term)

- 3.27 The construction, operation and expansion of an airport imposes a range of effects on local communities and businesses, not least in terms of the noise and pollution caused by aircraft movements and passenger and cargo access to the airport. However, airports can also support a range of economic and leisure activities. There are, therefore, complex trade-offs between the interests of various affected parties. As a consequence, planning law is a significant feature of the airports market and materially affects the nature and degree of competition in this market.
- 3.28 The ability to secure the necessary planning permissions is a significant barrier to entry and expansion in the airports market, particularly where airports are located near large numbers of people, as is the case in the southeast of England (and, to a varying degree, elsewhere in the UK).

⁴⁵ These figures have been rounded.

- 3.29 The CAA is not well placed to provide the CC with evidence on the detailed operation of the UK planning system. However, the CAA considers it important to distinguish between those aspects of the planning regime that impose necessary constraints on the airports market – constraints that all airports must then compete within – from features that might unnecessarily distort competition by, for example, conferring undue advantage on certain parties or by introducing avoidable uncertainty or delay into the process.
- 3.30 An additional feature of the airports market is the potential for their operations to be constrained by the availability of airspace. The airspace in the southeast of England is used in a relatively intensive manner, which necessitates the planning of the airspace in order to maintain safe and efficient operation of aircraft movements⁴⁶. Whilst it is possible to deliver additional airspace through the use of technology and design changes, any significant changes need to be delivered incrementally in order to maintain the integrity of the safety processes and by necessity are therefore planned and implemented over a significant timescale. In 2007 CAA and DfT launched a project to consider the impact of forecast growth on southeast airspace as a whole in the period upto 2030.
- 3.31 Ultimately, airspace is a finite resource. Therefore, as the demand for airspace increases, the instances of competing demands will increase with a concomitant increase in the likelihood of significant trade-offs having to be made between the interest of various airports, users of these airports, the communities affected by aircraft noise and other users of UK airspace, such as the military and general aviation.
- 3.32 Over time, incremental changes to controlled airspace volumes and modifications to arrival and departure routes have been made to increase capacity and improve the efficiency of the airspace. To date all airspace change requests have been managed and implemented. However, the CAA and NATS are of the view that, were all of the SE airport development plans⁴⁷ to come to fruition, there would not be sufficient airspace capacity to accommodate the scale of predicted traffic growth on the basis of current and predicted technology. As a consequence, airspace constraints may affect the future nature and degree of competition in this market.
- 3.33 Finally, it should be noted that there is a link between the delivery of additional capacity at designated and non-designated airports and the regulatory framework that is applied to UK airports. This is discussed in more detail in chapter 4.

BAA's airports in Scotland

- 3.34 None of the airports in Scotland are designated for price control and, as a result, the analysis undertaken by the CAA of these airports is more limited than for BAA's London airports. However, the CAA has sought to highlight the features that,

⁴⁶ This is achieved through internationally agreed horizontal and vertical separation distances that are applied to aircraft operating within defined volumes of airspace.

⁴⁷ As currently included in airport master plans and the DfT's Air Transport White paper Progress Report.

based on the information currently available to it, might be relevant to the Market Investigation.

Overlapping catchment areas

- 3.35 As for BAA's London area airports, to understand whether BAA's Scottish airports might be able to compete with each other it is useful to consider the extent to which their catchment areas overlap.
- 3.36 BAA's three airports in Scotland are each located less than 10 miles from the relevant city centre, but do not have direct connections to the national rail network⁴⁸. Edinburgh and Glasgow airports are located relatively close to each other, being approximately 50 miles apart. Aberdeen Airport is significantly further from either of these airports, being approximately 130 miles from Edinburgh Airport.
- 3.37 Prestwick, the other major (non-BAA) airport in Scotland, is located 30 miles to the southwest of Glasgow city centre, but does benefit from a direct train connection to Glasgow Central station.
- 3.38 The CAA's analysis is consistent with that presented by the OFT and suggests that there are strong overlaps between the potential catchment areas of Edinburgh and Glasgow airports and between Glasgow and Prestwick airports. However, due to the location of Aberdeen, and the relatively low population density between Aberdeen and lowland Scotland, the potential overlaps between Aberdeen Airport and Edinburgh, Glasgow and Prestwick are much less marked.
- 3.39 The CAA has also analysed the market position of Manchester Airport. This analysis looked at whether there were likely to be significant competitive interactions between Manchester Airport, its regional competitors, and airports located in Scotland. The CAA's initial view was that the airports in England only interact to a limited extent with those in Scotland⁴⁹ and that the airports in Scotland were unlikely to be material in the context of understanding the competitive constraints facing Manchester Airport.

Passenger information and airport switching

- 3.40 Reflecting the CAA's more limited role in regulating airports in Scotland, the CAA has not undertaken a detailed analysis of the composition and characteristics of passengers using the Scottish airports. However, there appears to be no *a priori* reason to believe that they would exhibit fundamentally different patterns of behaviour than those in the southeast or north and northwest of England⁵⁰. It is likely, therefore, that a significant proportion of passengers are willing and able to

⁴⁸ Although a direct rail link to Edinburgh airport was given Royal assent on 19 April 2007, and construction is due to start in 2008.

⁴⁹ For example, the CAA's 2005 survey data shows that only Newcastle, Manchester and Heathrow serve a material number of passengers originating in Scotland but that combined these passengers account for only 3.5 per cent of those originating from Scotland. In addition, only around one per cent of passengers using airports in Scotland originate from outside of this area.

⁵⁰ The CAA has undertaken market analysis of these two regions as part of its price control reviews of BAA's London airports and Manchester Airport, respectively.

compare, and potentially switch between, alternative airports, airlines and, for some passengers, destinations.

- 3.41 However, a greater proportion of passengers using Scottish airports do so to travel to domestic destinations (over 60% of Scottish originating passengers in 2005) or for business purposes (over 30% of Scottish originating passengers at the three BAA owned airports in 2005). These types of passengers are typically less willing to accept longer surface access journeys to reach their chosen airport. This would suggest that the relevant catchment area for analysing competition between the airports in Scotland might be, on average, narrower than for those located in the southeast of England. In addition, this would suggest that greater consideration should be given to the impact of road and rail alternatives in relation to the Scottish airports.

Competition between airlines located at different airports

- 3.42 The CAA has not undertaken detailed analysis to assess the extent of competition between airlines located at the major airports in Scotland. It is, however, possible to highlight some of the factors that might facilitate or inhibit such competitive interaction.
- 3.43 Glasgow, Edinburgh and Aberdeen airports all serve a relatively high proportion of domestic passengers (51, 72 and 69 per cent of passengers respectively⁵¹); a significantly higher proportion of passengers than at any of the major airports in England. These three airports also have a high proportion of business passengers, relative to most other UK airports. This is likely to have the effect of reducing the size of relevant catchment area for the airports, relative to these other airports, reflecting the lower willingness of domestic and business passengers to accept longer journeys to reach their chosen airport. However, in the case of Edinburgh, Glasgow and Prestwick airports, this effect will, to some degree, be offset by the proximity of the airports.
- 3.44 There are, however, extensive route overlaps between Edinburgh and Glasgow airports⁵², and significant route overlaps between these two airports and Aberdeen. This is likely to increase the number of passengers who are able to switch between these airports. Route overlaps with Prestwick are less marked, but are still significant.
- 3.45 Further, the major airlines operating out of Edinburgh, Glasgow and Aberdeen airports are similar. This is likely to increase the ability of these airlines to relocate services, frequency or their growth plans between the three airports. Prestwick, by contrast, is dominated by Ryanair (which is also one of the airlines operating from Edinburgh, Glasgow and Aberdeen).

⁵¹ Source: CAA airport statistics, 2005. By way of comparison, less than ten per cent of passengers using Heathrow and Gatwick, and less than 30 per cent of those using Prestwick, are travelling on domestic services.

⁵² For example, all of the ten largest routes at Edinburgh are available at Glasgow (and vice versa).

Airport capacity constraints

3.46 The airports in Scotland serve significantly fewer passengers than the major London airports. In 2006 Glasgow served 8.8 million passengers, whilst Edinburgh served around 8.6 million. Aberdeen and Prestwick, the two next largest airports, served around 3.2 and 2.4 million passengers respectively. The issue of runway capacity constraints is, therefore, likely to be a less significant feature of the market within which these airports operate than it is for the London-area airports.

Prospects for airport expansion

3.47 The CAA understands that the majority of predicted growth at Edinburgh and Glasgow will be accommodated by developments to maximise the use of their existing runways, through incremental investment in terminal, stand and surface access assets. However, the airports' masterplans, which set out the longer-term development plans (up to 2030), indicate that both of the airports have taken steps to enable the construction of an additional runway in the future⁵³.

Potential benefits from greater competition

3.48 The magnitude of any gains from any change to BAA's ownership of UK airports will, in large part, depend upon the potential for competition between airports to deliver benefits to passengers over the short and long-term. The previous section set out a range of factors that the CAA considers relevant to any assessment of the current and potential degree of competitive interaction between BAA's airports and, to a lesser degree, between these airports and their potential non-BAA competitors.

3.49 By their nature, the gains from competition are difficult to quantify, as they tend to relate to the incentives faced by companies to invest, innovate and respond to risk and uncertainty. Reflecting this difficulty, the CAA has sought to set out the range of potential effects that might arise from additional competition between BAA's airports, but has not undertaken any detailed quantitative analysis at this stage.

BAA's London airports

3.50 As noted above, capacity constraints are an important feature of the operation of the airports market in the southeast of England. It is, therefore, important to consider whether BAA's London airports would face improved investment incentives if they were not under common ownership.

3.51 In principle BAA's ownership might impact upon the airports' investment incentives in two respects:

- Joint ownership might provide an incentive to BAA not to invest in airport assets that compete with assets at other BAA airports, or impact upon the investment incentives faced by non-BAA airports.

⁵³ In addition, the Government's Air Transport White Paper (2003) stated that land should be safeguarded for terminal development and an additional runway at Edinburgh Airport and that substantial terminal development at Glasgow Airport was supported, and should be safeguarded.

- Joint ownership might strengthen the case for ex ante economic regulation that could have adverse impacts upon investment incentives at both the price regulated (designated) airports and other, competitor, airports⁵⁴.

Competition for airport capacity

- 3.52 Growing passenger demand in a market is likely to be first met through a combination of incremental expansion of the capacity at the airports in the market and through increases in the intensity with which airlines use that airport capacity. However, at some point, growing demand may make it economic to increase capacity at one or more airports through large construction projects that incur significant sunk costs: for example, where efficient expansion can only be delivered through the construction of an additional runway(s) and associated infrastructure.
- 3.53 In the short and medium term, the capacity available to airlines and the service provided to passengers will, in large part, be determined by the airport's previous investment decisions. The sunk nature of the assets also means that competition between airports in the short and medium term will be affected by the nature of previous investment decisions. The benefits accruing to consumers are, therefore, largely dependent on ensuring that airports' incentives to undertake large-scale investments are such that these projects are delivered at the right airport, at the right time and are appropriately specified.
- 3.54 Capital-intensive businesses can, and do, compete, even where local and/or national planning policy significantly affects the range of potential investments. For example, investment in electricity generation, gas storage and ports are all taken on commercial grounds by competing undertakings. In principle, therefore, BAA's London airports could compete to provide incremental capacity. However, the nature of airports also means that the process by which airports compete to provide capacity is, to some extent, atypical. Local planning authorities and central government both have an important role in influencing where, when and in what ways airports might be permitted to expand. The manner in which airports compete might, therefore, be more indirect than in some other, less capital intensive, industries. It is possible, though, to identify a number of ways in which separately controlled airports might in principle compete to provide capacity.
- 3.55 First, and related to the previous point, the discipline that the capital market provides might encourage airports to seek greater commitments and involvement from their customers. As in other capital-intensive industries, airports might seek volume commitments or finance from airlines, in order to reduce the risk associated with investment. Such arrangements are not currently common in the European airports markets⁵⁵, although this might reflect the heavily regulated, and largely

⁵⁴ A more detailed description of the potential impact that investment at designated airports might have on competing airports is set out in chapter 5 of 'Airports review – policy update', CAA, May 2006.

⁵⁵ The CAA is aware of a small number of airport-airline agreements, linked to capital investment at smaller airports in the UK and Europe.

state controlled, nature of many European airports markets. However, there are relevant parallels from other capital-intensive industries⁵⁶.

- 3.56 Second, in appraising an investment project the owner of a group of airports operating in the same market would be expected to consider the impact of investment at one airport on the profitability of its other airports. For example, under the current ownership structure, when evaluating an investment project, BAA would be expected to incorporate the impact of expansion at Heathrow on the returns generated by Gatwick and Stansted. In the absence of joint ownership of these airports, the owner of Heathrow would be expected to evaluate projects based on the expected costs and revenues associated with the Heathrow business alone.
- 3.57 Third, airports might 'compete' to influence local or national government policy, in order to obtain support for their developments. This 'competition' could take a number of forms. For example, it might provide a stronger incentive on airports to provide detailed and transparent assessments of the relative merits of their proposals. Separate ownership might also facilitate scrutiny of these proposals, as competing airports might seek to challenge the assumptions adopted by competing proposals. Additionally, airports might seek to influence local opinion towards their expansion plans by investing in abatement schemes or increasing their contribution to local employment⁵⁷.
- 3.58 Fourth, where the returns to investment are determined more by commercial pressures than by the regulatory treatment of capital expenditure, it is likely that airports will need to justify large capital projects to the capital markets. Where projects are relatively risky (or have been inadequately justified) capital markets would be expected to require a higher financial return. In this manner, capital markets might be expected to direct funds towards more commercial, well-justified, projects.

Regulation and investment incentives

- 3.59 In its publications⁵⁸, the CAA has highlighted that price control regulation is likely to impact upon the investment incentives faced by regulated (i.e. designated) and non-regulated airports. The CAA has also highlighted that the current circumstances at Stansted result in a situation where the application of a standard ('building block') price cap would be likely to distort significantly BAA's investment incentives⁵⁹.
- 3.60 To the extent that the need for price control regulation arises as a result of BAA's joint ownership of Heathrow, Gatwick and Stansted, separate ownership might reduce the need for price regulation (or economic regulation in its current form)

⁵⁶ For example, recent investment in UK gas import infrastructure has been backed by long-term gas purchase contracts.

⁵⁷ London City has an employment policy that seeks to maximise employment from the local area.

⁵⁸ 'CAA's initial price control proposals - supporting paper 1', CAA, December 2006

⁵⁹ See chapter 23 of 'Airports price control review - initial proposals for Heathrow, Gatwick and Stansted', CAA, December 2006

and, as a consequence, remove (or reduce) the potential distortions that such regulation might cause to investment decisions.

Other potential benefits from airport-airport competition

- 3.61 As noted above, it is difficult to identify and, in particular, quantify the potential benefits that might accrue to users if there was greater competition between BAA's London airports. However, it is possible to focus on the areas where competition between airports might in principle deliver additional gains to passengers and/or airline customers.
- 3.62 At a high-level, airports can compete by delivering value to passengers and/or airlines in a way that enables the airports to generate additional returns. Airports can, to some degree, alter passengers' willingness to use their facilities, by reducing the level of charges levied directly on passengers (e.g. car parking charges), or by improving service quality (e.g. cleanliness and retail offerings). However, there are constraints on the ways in which airports can modify their service offering. For example, the physical location of airports relative to potential passengers will remain a significant determinant of an airport's relative attractiveness.
- 3.63 In addition, an airport's ability to attract passengers is also affected by the services offered by airlines located at the airport. In this respect, airports can affect the potential returns earned by airlines through the level of their charges and the value-added by the service provided by the airport to the airlines. For example, airports can take steps to enable airlines to operate more efficiently, or to offer more value-added services to passengers, such as business lounges.
- 3.64 In general, therefore, airports facing increased competitive constraints might be expected to be more responsive to the needs of passengers and airlines, and to compete both in terms of price and service quality. This could, for example, lead to greater differentiation in the service offerings at different airports or, potentially, within each of the airports.
- 3.65 In order to identify where potential gains might arise – and to highlight where these gains might be quantifiable – it is useful to consider the nature of potential gains in terms of the main activities undertaken by the airports: the delivery of capital investment; the provision of aeronautical services; and the provision of non-aeronautical, or commercial, services.
- 3.66 In relation to the first of these – the delivery of capital projects – additional competition might be expected to improve the incentives faced by each airport to improve capital expenditure efficiency, through improved cost and quality control. However, it should be noted that BAA is widely regarded to have managed the Terminal Five development at Heathrow well and to have deployed a range of 'best practice' techniques to project and contractor management. In addition, under

constructive engagement, the Heathrow airlines commissioned a study⁶⁰ into the efficiency of BAA's delivery of capital investment projects.

- 3.67 It is also possible that additional competition might lead to alternative approaches to the core aeronautical⁶¹ activity of the three airports. The operation of a large airport is complex and relies on a number of interdependent airport, airline and third-party business processes. For example, the ability of the airport to process passengers from their arrival at the airport to the departure gate depends on airport processes (such as security, the design of way-finding, etc), airline processes (notably passenger check-in) and the activities of various third parties (such as baggage handling agents).
- 3.68 The CAA has commissioned work as part of its price control review⁶² that analysed the process efficiency of BAA's London airports. This work concluded that process efficiency varied across terminals, activities and airports and that, whilst there were areas where potential improvements could be identified, there were areas where BAA performed well.
- 3.69 In terms of non-aeronautical activities, competing airports might face sharper incentives to deliver innovative retail offerings to passengers, or to facilitate differentiated service provision by airlines to different passenger types. Indeed, BAA has argued that the current form of regulation of its non-aeronautical activities limits the returns to investment and innovation⁶³.

Reduced scope for economic regulation

- 3.70 As the preceding discussion highlights, economic regulation can seek to mirror the incentives created by competition. But it is likely to do so in an imperfect manner, reflecting the informational asymmetries between the regulated company and the regulator, as well as the inherent difficulty in identifying complex and changing consumer preferences.
- 3.71 Greater competition between BAA's London airports has the potential, therefore, to replace the discipline of economic regulation with that of competition. Indeed, the analysis undertaken by the CAA on the competitive constraints facing Stansted suggests that there is a case for considering the removal of price control regulation at that airport, even with BAA's current ownership structure.
- 3.72 However, the separation of BAA's three London airport might not remove the need for economic regulation due to the *potential* for individually owned airports to retain very substantial market power. For example, the network characteristics of some of the carriers operating at Heathrow might limit their ability to relocate business to

⁶⁰ For a description of the findings of the Currie & Brown study, see chapter 15 of 'Airports price control review – initial proposals for Heathrow, Gatwick and Stansted airports', CAA, December 2006.

⁶¹ In this context, the CAA is referring to the 'core' airport functions of processing passengers for their boarding onto aircraft and of managing the flow of aircraft to and from the terminals.

⁶² 'CAA's initial price control proposals – supporting paper III: airport efficiency assessments – overview and summary', Booz Allen Hamilton for the CAA, December 2006

⁶³ See, for example, 'BAA response to CAA policy issues consultation paper: BAA/Q5/100', BAA, March 2006, including BAA's response to chapter 6 and Annex 3.

other airports. This might confer a position of substantial market power on an owner of Heathrow even if that owner had no other UK airport investments. It should be noted that even in these circumstances the additional competitive constraints that might flow from separate ownership might enable the scope of that regulation to be reduced and/or a more targeted, proportionate approach.

- 3.73 A further consideration in this respect is that, in the absence of joint ownership, any financial distress at one of the London airports would be less likely to coincide with similar distress at the other London airports. The risk of disruption to investment and service would, as a result, be reduced. As a consequence, the need for an incentive package that protected passengers from the effects of delayed investment would be reduced.

BAA's Scottish airports

- 3.74 Whilst the CAA has not undertaken detailed analysis of the market circumstances faced by BAA's airports in Scotland, many of the considerations set out above may also apply to these airports. However, they do not currently face the same degree of capacity constraint as those in the southeast of England, and have a similar mix of passengers and airline types, which might suggest greater scope for additional competition on price in the short and medium term. Indeed, the OFT suggested that Prestwick had exerted some downward pressure on airport charges at Glasgow⁶⁴.
- 3.75 Growth in passenger demand in Scotland might, at some point, justify investment in additional runway capacity at Edinburgh or Glasgow. In such circumstances, were the two airports to be separate ownership it might be reasonable to expect them to compete for airline business, public opinion and the financing needed to support such an expansion. Competition might also be expected to provide an additional incentive for each airport to specify facilities, and time any expansion, to meet the needs of consumers.

Potential costs from separation

- 3.76 The previous section sought to identify, although not quantify, the potential gains that might arise from additional competition between BAA's airports in Scotland and in the southeast of England. However, BAA's joint ownership of airports could in principle generate benefits in terms of economies of scope or scale that might flow through to consumers; structural change could reduce such benefits.
- 3.77 As part of its price control review of BAA's London airports, the CAA has assessed the nature and materiality of economies of scale and/or scope in: operating functions; financing; and investment.
- 3.78 BAA utilises a central service function to provide a number of support services, such as IT and Human Resources, to its airports. One justification for such central provision could be that it reduces costs, by taking advantage of scale economies.

⁶⁴ 'BAA: the OFT's reference to the Competition Commission', OFT, April 2007

The provision of inter-company services might also improve the tax efficiency of the BAA group. However, the CAA does not consider that a structural remedy would necessarily result in a material reduction in the benefits accruing to consumers from any such scale economies for two reasons. First, the benefits are likely to be relatively limited in scale. For example, the total annual operating costs incurred by BAA's central and shared services equate to around £150m. By way of comparison, operating costs at Heathrow alone exceed £0.5bn annually.

3.79 The CAA has also considered whether there are reasons to believe that economies of scale in financing costs might be material. In this respect, the CAA considers that the CAPM framework, adopted by the CAA and other regulators as the core tool for their cost of capital assessments, does not support the view that there will be any such gains⁶⁵. However, some regulators have made adjustments to reflect a 'small company' premium. The CAA does not consider that any of BAA's airports, particularly Heathrow, Gatwick or Stansted, would fit within such a definition⁶⁶. Furthermore, were there to be material economies of scale in financing, this would increase the likelihood of airport disposals to undertakings capable of realising these efficiency gains.

3.80 It is also possible that the joint ownership of BAA's airports enables investment to be 'coordinated' across its portfolio. The CAA has considered similar arguments in its assessment of whether the price controls for Heathrow, Gatwick and Stansted should be based on separate regulation⁶⁷ or whether a form of system pricing should be implemented. The CAA presented a detailed assessment of the arguments, against its statutory duties, with its December 2006 Initial Proposals document⁶⁸. In proposing a policy of separate price caps, the CAA argued that such an approach:

- is in the long-term interests of users, as it minimises distortions to long-term investment decisions and, therefore, long-term airport competition;
- delivers against the CAA's duties in relation to users of non-designated airports, their profitability and the need to encourage timely investment at these airports;
- appears consistent with the principles of UK and European competition law, which largely prohibits cross-subsidies from dominant undertakings; and
- encourages each airport business to focus on the specific needs of its users, facilitating debate and agreement between the two groups.

⁶⁵ See paragraphs 91 to 94 of 'Initial price control proposals: supporting paper I – separate regulation', CAA, December 2006

⁶⁶ See chapter 5 of 'Initial price control proposals: supporting paper XII – cost of capital policy framework', Europe Economics paper for the CAA, December 2006.

⁶⁷ A policy of separate (or 'stand-alone') regulation for the price controls on BAA's three designated airports involves price caps that are set at each airport by reference to the costs, assets and market conditions of each airport individually. The setting of price caps using a 'system' approach can take a number of forms. However, the main feature of 'system' approach is that costs can be incurred at one airport and recovered from revenues at another.

⁶⁸ 'Initial price control proposals: supporting paper I – separate regulation', CAA, December 2006

- 3.81 The CAA considers that these arguments would also apply to an assessment of whether there were likely to be gains to consumers from investment that is 'coordinated' by BAA, across its London airports.
- 3.82 In summary, economies of scale might arise from ownership of multiple airports, as this might facilitate the central provision of certain functions or reduce average financing costs. However, any benefits of multiple airport ownership would not appear to be associated with the joint ownership of *neighbouring* airports. A structural remedy would not, therefore, necessarily result in a loss of such benefits as, if such economies of scale are material, this would increase the likelihood of any undertaking acquiring any of BAA's airport being in a position to realise such economies.
- 3.83 However, the evidence available to the CAA suggests that the economies of scale or scope arising as a result of the joint ownership of neighbouring airports are, in any case, unlikely to be material.

Risk-based assessment

- 3.84 The analysis of BAA's joint ownership of UK airports is complex. It requires an assessment of a number of interrelated issues, including the impact that joint ownership has on the need for, and scope of, economic regulation. Furthermore, it is difficult to establish quantitatively the gains that might accrue from any additional competition.
- 3.85 This suggests that the assessment of BAA's joint ownership needs to balance the risk of unjustified structural change against the potential gains that might be foregone if a justified structural remedy were not adopted.
- 3.86 In this respect, the CAA considers that it is relevant to consider the costs that might arise should a structural remedy not result in a material increase in competition between the airports and, as a result, separation not result in any reduction in the number of airports subject to price control regulation. These costs might include:
- a perception of an increase in regulatory risk facing the airport businesses following a regulatory imposed change in market structure, which might put upward pressure on the allowed cost of capital;
 - potential duplication of regulatory compliance costs for regulated airports, as each independently owned London airport would need an independent regulatory team; and
 - higher costs incurred by the CAA in its regulatory reviews (assuming that the burden of regulation could not be reduced through the increased use of inter-airport benchmarking).
- 3.87 However, the CAA's regulation might also be simplified, as some issues would cease to be relevant, or as important. For example, the CAA would not need to consider whether the regulatory framework unduly facilitated anti-competitive cross-

subsidies between regulated businesses, nor would it need to devote resources to cost allocation between regulated airports.

- 3.88 As these issues are likely to be considered during any remedies stage of the CC's Market Investigation, the CAA has not undertaken any detailed analysis and has not sought to reach any views on the balance of risks, at this stage.

4. The economic regulation of airports

Introduction

- 4.1 The OFT's reference to the Competition Commission⁶⁹ (CC) highlighted that economic regulation was one of a combined set of potential features that might have an adverse effect on competition. This chapter sets out the features of the regulatory framework that might merit further consideration by the CC in its Market Investigation.
- 4.2 The framework for the economic regulation of airports has remained largely unchanged over the twenty years since the Airports Act came into force in 1986. Over the same period much has changed in the UK aviation market, including the growth of traffic at regional airports; increasing competition between airlines; the increased ability and willingness of passengers to compare competing alternatives; and wider changes in the general UK competition regime.
- 4.3 Against this background, this chapter is structured in five main sections. The first sets out the CAA's roles and responsibilities in relation to the regulation of UK airports, airlines and airspace. The second and third highlight the main features of the framework of economic regulation and competition law as applied by the CAA and other organisations, respectively. This is followed by a discussion of the issues raised by economic regulation and the potential for adverse effects to arise. The final section sets out the range of potential reforms that might merit further consideration as part of the CC's Market Investigation.

The role of the CAA

- 4.4 The CAA is the UK's independent aviation regulator with civil aviation regulatory functions within a single, specialist body. The CAA's regulatory functions are:
- economic regulation;
 - airspace policy;
 - safety regulation; and
 - consumer protection.

A brief summary of the three latter functions is set out below. The CAA's economic regulation functions are discussed in more detail in the subsequent section.

Airspace policy

- 4.5 The Directorate of Airspace Policy (DAP) is responsible for the planning and regulation of all UK airspace including the navigation and communications infrastructure to support safe and efficient operations. DAP is staffed by civilian and military experts with experience of commercial, business, recreational and

⁶⁹ 'BAA: the OFT's reference to the Competition Commission', OFT, April 2007

military aviation. The needs of all users are accommodated, as far as possible, with regard for safety as well as environmental, economic and national security considerations.

Safety regulation

4.6 The role of the CAA's Safety Regulation Group (SRG) is to develop the UK's safety environment, in partnership with industry, by driving continuous improvements in aviation safety in the UK and, in partnership with the European Aviation Safety Agency (EASA), across Europe. The CAA's safety regulation covers the licensing of flight crew, aircraft engineers and air traffic controllers, the airworthiness of aircraft, the certification of UK operators of aircraft, the licensing of aerodromes, and air traffic services providers and maintenance of air traffic services standards.

Consumer protection

4.7 The Consumer Protection Group (CPG) is responsible for the regulation of air travel organisers and provides consumer protection for holiday-makers through Air Travel Organisers' Licensing (ATOL). It also implements European and UK legislation on the licensing of airlines and other consumer measures on behalf of the Government.

The CAA's economic regulation of airports

4.8 UK airports are subject to three levels of regulatory intervention:

- no specific economic regulation of the smallest airports;
- the need to hold a "permission to levy airport charges" once an airport exceeds a certain level of turnover; and
- designation of certain airports for price control purposes.

Permission to levy airport charges

4.9 With limited exceptions, any UK airport whose turnover has exceeded £1 million in two of the previous three years should hold a permission to levy airport charges from the CAA. (In the case of the BAA airports the initial permissions were granted by the Secretary of State rather than the CAA). As the turnover threshold has not changed since 1986, over 50 airports currently hold a permission to levy airport charges as against 22 in 1987. For the majority of these airports (i.e. those that are not "designated") there is no *ex ante* regulation beyond a need to supply the CAA with certain limited financial information. In addition, airports holding a permission to levy airport charges are also granted certain development rights⁷⁰ by the Airports Act that remove the need to obtain planning permission for certain facilities.

4.10 If an airport holds a permission, it is possible for the CAA to investigate complaints of unreasonable discrimination or other forms of anti-competitive behaviour, by the

⁷⁰ These are referred to as "general development orders".

airport and, where necessary, to impose conditions (or accept undertakings) that provide a remedy. The CAA has reviewed its use of these powers (under section 41 of the Airports Act) and in December 2006, following consultation, it published its policy and processes for the application of section 41.⁷¹ The CAA confirmed that it would generally expect to apply section 41 in a way that was in line with the application of the Competition Act and EC competition law. Consequently, an airport would normally have to be found to be dominant within a relevant market before the CAA would consider possible remedies under the Airports Act.

The designation of airports

- 4.11 The highest level of economic regulation applies at those airports that have been designated by the Secretary of State. In 1986, the Secretary of State designated Heathrow, Gatwick, Stansted and Manchester Airports.⁷² No new airports have been designated since 1986 and none has been de-designated. At the designated airports, the CAA must, after a reference to the Competition Commission, set maximum limits on airport charges for a period of five years and impose conditions to remedy any public interest findings made by the Competition Commission at each five-yearly review.
- 4.12 In setting price controls at designated airports (and with all aspects of the economic regulation of airports) the CAA is given a statutory duty to exercise its regulatory functions in a manner in which it considers is best calculated:
- to further the reasonable interests of users of airports within the United Kingdom;
 - to promote the efficient, economic and profitable operation of such airports;
 - to encourage investment in new facilities at airports in time to satisfy anticipated demands by the users of such airports; and
 - to impose the minimum restrictions that are consistent with the performance by the CAA of its regulatory functions.
- 4.13 The CAA must also take into account such of the UK's international obligations as are notified to it by the Government relevant to the imposition of charges on airlines by airports.
- 4.14 On 26 February 2007, the Department for Transport issued a consultation paper on the proposed criteria for the designation and de-designation of UK airports for the purposes of section 40 of the Airports Act 1986⁷³. These would apply in place of the criteria for designation established by the Government in 1995. The revised criteria which would determine whether designation is appropriate would be:

⁷¹ The CAA's use of section 41 of the Airports Act 1986; The CAA's policy and processes, CAA, December 2006 available at www.caa.co.uk

⁷² The Economic Regulation of Airports (Designation) Order 1986, SI 1986/1502.

⁷³ 'Consultation on proposed designation and dedesignation criteria for airports', DfT, February 2007

- the airport, either alone or together with any other airport(s) in common ownership or control, has or is likely to have substantial market power; and
- domestic and EC competition law may not be sufficient to address the risk that, absent regulation, the airport would increase and sustain prices profitably above the competitive level or restrict output or quality below the competitive level; and
- price regulation under section 40 of the Airports Act 1986 would, taking account of the magnitude of the risk identified in the second bullet above and its detrimental effects were it to materialise, deliver additional benefits (ie over and above competition law) which exceed the costs and potential adverse effects of price regulation (ie the incremental benefits are positive).

4.15 The consultation paper proposed that de-designation would be appropriate if, in the view of the Secretary of State, any of these factors would cease to apply were the airport to be de-designated. In reaching a decision to designate or de-designate, the Secretary of State would take into account all other relevant matters, including international obligations.

4.16 The CAA has responded to the Department for Transport's consultation agreeing that there is a strong case for updating the existing criteria and for establishing a set of criteria that would apply to both the designation and de-designation of airports. On the proposed criteria themselves, the CAA has suggested that the Department for Transport should clarify that whilst a position of substantial market power is a necessary pre-condition for designation, it is not a sufficient condition and that the level of market power held by the airport would be likely to be greater than this level for designation to be justified.

Regulation of airports by other organisations

4.17 Airports are subject to general competition law applied by national and EU competition authorities. Within the UK, the Office of Fair Trading (OFT) is responsible for enforcing the prohibitions on anti-competitive agreements or conduct in the Competition Act 1998. The OFT has powers to impose fines of up to 10% of world-wide turnover where an undertaking is found to be in breach of one of the prohibitions. In the Enterprise Act 2002, the OFT was given new powers to make market investigation references to the Competition Commission where the OFT has reasonable grounds for suspecting that any feature, or combination of features of a market for goods or services prevents, restricts or distorts competition in the UK. Finally, since 2004 the OFT has been required to apply the provisions of Article 81 and Article 82 of the EC Treaty where the agreement or conduct in question is capable of affecting trade between Member States.

4.18 The European Commission has powers to enforce EU competition law where an airport is engaged in anti-competitive practices that have an effect on inter-EU trade. There are also individual measures implemented within the EU that affect

airports. Examples are the ground handling directive⁷⁴ which is designed to open up ground handling to greater competition at the more significant airports within the EU and the regulation concerning persons with reduced mobility travelling by air⁷⁵.

- 4.19 The Commission has recently proposed a directive on airport charges⁷⁶ which would introduce a number of new regulatory requirements on airports that have, hitherto, fallen outside the reach of regulation. The CAA has expressed concerns about the Commission's proposals in that they would require a degree of transparency in airport costs that could be inimical to the maintenance of a competitive airports market. The current proposals also introduce rights to seek intervention by a national regulatory body that could cut across or undermine commercial negotiations between airports and airlines and could help encourage rather than resolve disputes.

Potential effects arising from the current framework of economic regulation

- 4.20 Price control regulation is a significant intervention in the operation of a commercial business. It is always an imperfect substitute for well functioning competition, and can have adverse effects and costs. Many of these effects are well documented in academic literature; the CAA has not sought to set out a review of this work from first principles in this document.

- 4.21 Rather, the CAA has focused on four aspects of the operation of airports that together significantly impact upon customers and consumers of the services delivered by UK airports, namely:

- In the short-term, the:
 - **prices** set by airports; and
 - **service quality** received by customers and consumers; and
- in the longer-term, the:
 - **investment in capacity and service quality** undertaken by the airport; and
 - **operating and capital efficiency** of the airport.

- 4.22 The following sections discuss these factors in turn, setting out the challenges associated with delivering a suitable incentive framework and providing a brief summary of the CAA's response to these challenges.

⁷⁴ Council Directive 96/67/EC of 15 October 1996 on access to the groundhandling market at Community Airports.

⁷⁵ Regulation (EC) No 1107/2006 of 5 July 2006 concerning the rights of disabled persons and persons with reduced mobility when travelling by air.

⁷⁶ Proposal for a Directive of the European Parliament and of the Council on airport charges, Commission of the European Communities, January 2007.

Prices

- 4.23 Where airports enjoy a position of significant market power, they may have the ability and incentive to restrict output, and/or reduce service quality, below the competitive level, in order to raise prices and profitability above the level that might be expected in a reasonably competitive market. A price cap can provide a relatively direct remedy to this risk, by limiting the ability to raise prices and, therefore, mitigating the risk that output is restricted below the competitive level.
- 4.24 However, the CAA has highlighted that whilst a position of significant market power is a necessary condition for the application of price controls, it is not a *sufficient* condition⁷⁷. There are a number of reasons for this, including: that UK and European competition law provide a tool for dealing with the abuse of a dominant position; and that price control regulation imposes a number of direct and indirect costs on the regulated businesses, customers and consumers.
- 4.25 In relation to the latter, the CAA has previously highlighted the importance of assessing the impact of its price control decisions on users of both designated and non-designated airports, as well as on the profitability of and likely returns to investment at these airports⁷⁸. For example, the CAA's decision on the appropriate price cap to apply to Manchester Airport from 2003-2008 recognised the impact that this cap would have on the development of airports that were in competition with the airport, such as Liverpool Airport⁷⁹. More directly, the CAA's price cap decision has the potential to affect significantly the returns to investment in capacity and service quality at the designated airports. This is discussed in more detail below.

The current regulatory approach

- 4.26 The CAA is currently undertaking the periodic price control reviews of the four designated airports. In this paper, the CAA does not set out a detailed explanation of its approach to setting the price cap; such a description is available in the CAA's recent price control publications⁸⁰.
- 4.27 These documents describe the CAA's statutory duties in respect of price controls and provide additional detail on the CAA's proposals to tailor its regulation of BAA's designated airports to the individual circumstances of each airport, taking account of the interactions between BAA's designated airports and other, non-designated, airports. For example, the CAA has stated that the strength of the competitive constraints on Stansted, together with the impact that continued price control regulation would have on investment incentives, suggest that Government should consider the case for removing the requirement to set an *ex ante* price control on Stansted Airport. The CAA has also proposed that, in the event that Stansted Airport remains designated, it could implement a 'market-led' price cap, rather than

⁷⁷ See, for example, the CAA's response to the DfT consultation on the proposed designation and de-designation criteria for Airports.

⁷⁸ 'CAA's initial price control proposals - supporting paper 1', CAA, December 2006

⁷⁹ 'Economic regulation of Manchester Airport: 1 April 2003 to 31 March 2008', CAA, March 2003. In particular, see chapter 5.

⁸⁰ For example, see 'Manchester Airport price control review – policy consultation', CAA, January 2007.

one based on the 'building block' approach⁸¹. Such a price cap would be set at a level unrelated to the level of investment undertaken by BAA, but at a level high enough to avoid disincentivising investment to meet anticipated demand (either by Stansted or other airports) though not so high as to compromise the reasonable interests of users⁸².

Service quality

- 4.28 The bundle of services provided by airports to airlines and passengers has a range of characteristics. For example, passengers are likely to place value on the ease of using the airport, the availability and cleanliness of facilities, the incidence of queuing and the range of retail services offered at the airport. However, many of the aspects of the service quality received by passengers will depend upon the operation of joint airport and airline business processes, as well as those of a range of other third-party suppliers. Furthermore, the value placed on different aspects of service quality is unlikely to be easily quantified, not least because it is likely to vary significantly between different passengers.
- 4.29 A practical consequence of this is that, relative to other regulated businesses⁸³, it is likely to be relatively more complex for economic regulation to replicate the discipline of effective competition.

The current regulatory approach

- 4.30 There are a number of elements of the price control framework that combine to determine BAA's incentive to deliver service quality at its designated airports. First, BAA's designated airports are subject to a number of service quality incentives, whereby the airport is required to pay rebates to airlines if certain service quality metrics are not met⁸⁴. Third, poor service quality could be considered to amount to a "course of conduct that has operated or might be expected to operate against the public interest"⁸⁵. In such circumstances, the CC (in its role under the Airports Act 1986) could impose public interest conditions on the airport.
- 4.31 Second, the designated airports face some degree of competitive constraint from other airports and, should service quality deteriorate, might be expected to experience lower numbers of passengers that might otherwise be the case⁸⁶. Lower passenger numbers, in turn, could reduce BAA's returns within a price control period, due to the link between both aeronautical and retail income and

⁸¹ The building-block approach sets the price cap with reference to historical investment costs incurred and forecasts of the efficient level of operating, capital and financing costs over the subsequent five-year period.

⁸² See, for example, paragraphs 48 to 54 of 'Initial proposals for Heathrow, Gatwick and Stansted', CAA, December 2006.

⁸³ For example, the service quality of an energy network can be measured with reference to the frequency and duration of supply interruptions, or based on whether supply is maintained within appropriate operational limits.

⁸⁴ See, for example, chapter 9 of 'Price control review – initial proposals for Heathrow, Gatwick and Stansted airports', CAA, December 2006.

⁸⁵ See sections 43 and 45 of the Airports Act 1986.

⁸⁶ Indeed, during August 2006 the disruption caused by the changes made to the security clearance procedures at UK airports appears to have affected traffic volumes at Heathrow.

passenger numbers, and the link between total allowed revenue and passenger numbers⁸⁷.

Investment in capacity and service quality

- 4.32 Airports are capital-intensive businesses and, as noted in chapter 2, require investment in long-lived assets. This means that today's service is to large extent dependent on yesterday's investment and tomorrow's service is dependent on today's investment. Therefore, it will be important to encourage – through the regulatory framework – the level of investment necessary to satisfy anticipated demand. However, the demand for capacity, and/or for certain facilities, can change over time, in response to changing passenger preferences and airline business models.
- 4.33 Against this background, the regulatory framework should seek to provide appropriate incentives on airport operators to invest in the right assets, at the right time and in an economic and efficient manner. This task is, however, far from straightforward.
- 4.34 Investment at a non-regulated airport is likely to depend upon the balance between the expected incremental revenues and incremental costs generated by the project, taking into account the impact of uncertainty and risk. In addition to these factors, investment at a designated airports is likely to depend upon a range of additional factors, including the:
- return on capital allowed by the regulator (relative to the actual financing costs);
 - degree of uncertainty associated with the regulatory treatment of the costs and revenues associated with the project; and
 - additional returns associated with any increase in retail or other commercial income.
- 4.35 In principle, therefore, economic regulation can provide incentives to over-invest (i.e. to invest early or in over-specified assets – so called 'gold plating') or to under-invest. In practice, the balance between these two incentives will depend upon the individual circumstances of each airport, together with the package of incentives contained within the price controls. For example, in the circumstances that apply at Stansted, the CAA has stated that there appears to be a clear risk that regulation, whereby the price cap is based closely on the airport's regulatory asset base (RAB) and capital expenditure, has artificially distorted the incentives on Stansted airport.
- 4.36 This presents a challenge to the CAA, as there are a range of potential adverse effects that could arise from both under- and over-investment: it is not possible to

⁸⁷ The CAA has proposed to retain a per passenger price cap at Heathrow and Gatwick. As a result, these airports are allowed to recover higher revenues when passenger numbers are above the level set out in the building-block price cap calculation. More information is set out in the CAA's March 2007 price control reference to the CC.

adopt a general presumption that the net costs of one direction of bias are lower. Under-investment will result in passengers receiving lower levels of service quality, facing higher airfares and/or using airports that they otherwise would not have chosen to use (or choosing not to travel at all). However, over-investment might be expected to raise airport charges at a price-controlled airport⁸⁸ and has the potential to distort competition between designated and non-designated airports over the longer-term⁸⁹.

- 4.37 It should be noted that the assessment of the balance of these two risks needs to be set in the context of the other constraints on airport investment, not least those imposed by the planning system. For example, the effects arising from any incentive to over-invest might have been mitigated by the operation of the planning system. Similarly, in principle, the planning system could exacerbate the effects of any incentive to under-invest.

The current regulatory approach

- 4.38 As part of the current price control review of BAA's designated airports, the CAA has made a number of changes to its approach in order to improve the balance of investment incentives faced by BAA's airports.
- 4.39 First, the CAA has created a framework for constructive engagement between the airports and airlines, with the aim of significantly contributing to the evidence base upon which the CAA takes its price control decisions, enabling the CAA to focus its scrutiny on other aspects of airports' costs and efficiencies. Through this process, airlines have been able to scrutinise the airport's capital investment plans, providing a useful control against over-specified projects.
- 4.40 Second, the CAA has proposed that the price caps on BAA's designated airports be set at each airport by reference to the costs, assets and market conditions of each airport individually (an approach referred to as 'separate regulation'). Such an approach prevents cross-subsidies between BAA's airports, minimising the risk that there is a distortion to competition between airports and ensuring that the competitive constraints faced by each airport are not undermined. The CAA also highlighted that separate regulation encourages each airport business to focus on the specific needs of its users, facilitating debate and agreement between the two groups, such as that achieved under the constructive engagement processes⁹⁰.
- 4.41 Third, and as discussed above, the CAA has highlighted the potential for the traditional 'building-block' approach to price controls to distort investment decisions at Stansted, particularly where potential investments are large relative to the regulatory asset base of the airport. The CAA has made a number of proposals, including the application of a 'market-led' price cap to mitigate the adverse effects that might arise from such a distortion.

⁸⁸ Under a building-block price control, higher historical investment will tend to result in upward pressure on the price cap.

⁸⁹ The CAA has discussed the link between investment and competition between airports in 'CAA's initial price control proposals - supporting paper 1', CAA, December 2006.

⁹⁰ For more information see, 'CAA's initial price control proposals - supporting paper 1', CAA, December 2006.

- 4.42 Finally, the CAA has recognised the risk that, in the event that BAA's owners experience financial distress, efficient investment could be postponed. In response, the CAA has made a number of proposals that are intended to mitigate this risk and to ensure that risks associated with the financial structure of BAA, which users pay the airport operator to bear, are not passed through to airport users.
- 4.43 These proposals highlight that the balance of investment incentives will depend upon the particular circumstances faced by each individual airport, necessitating a tailored approach to price cap regulation. In addition, it is clear that the appropriate form of regulation can change over time and must respond to changes in circumstances.

Operating and capital efficiency

- 4.44 A lack of effective competitive constraints is likely to reduce the incentive faced by an airport to deliver efficiency improvements: both in terms of reducing unit operating costs and unit capital costs.
- 4.45 In the UK, the standard regulatory response is to apply a fixed, typically five-year, period for the price cap, allowing the regulated company to retain any efficiency gains that are made within this period, before passing these cost savings through to consumers by incorporating the efficiency gains in subsequent price cap calculations.
- 4.46 However, this approach is likely to reduce the returns that the regulated company might expect to earn from any given cost saving initiative. As a result, there is a trade-off between the strength of the incentives faced by the regulated company and the time period over which the company retains any efficiency gains. The CAA has considered these issues as part of the price control review⁹¹ in the context of delivering increased incentives to maximise commercial revenues, including whether the airport should be permitted to retain a greater proportion of any out-performance against the regulatory forecasts.
- 4.47 There are also potential trade-offs between the incentives to invest in capital projects and those relating to capital efficiency⁹². These arise, in part, due to the difficulty defining the various outputs that should be delivered by the investment projects undertaken by the airport and how these might vary in response to changing circumstances. A consequence of this is that, without detailed investigation, it can be difficult to differentiate clearly between, for example, an efficient scaling back of an investment project from an inefficient under-spend against the price control projection of capital investment.

⁹¹ See chapter 19 of the CAA's initial proposals (*op cit*)

⁹² For a more detailed discussion of incentives and the price control design see Table 19-1 of the CAA's initial proposals.

The current regulatory approach

- 4.48 There are a number of aspects of the current price control review of BAA's designated airports that relate to the incentives faced by BAA to improve operating and capital efficiency.
- 4.49 As discussed above, the constructive engagement between airport and airlines provides some scrutiny of the efficiency of proposed capital projects and of operating processes – particularly those that are co-delivered by the airport and airlines.
- 4.50 In addition, the CAA has commissioned a number of consultancy studies that have scrutinised aspects of BAA's designated airports. For example, the CAA commissioned consultants to assess the efficiency of various operating processes and to benchmark these processes against comparable processes at other airports⁹³. The CAA also commissioned scrutiny of BAA's proposed capital investment to increase the capacity of the existing runway at Stansted Airport (referred to as Stansted Generation 1)⁹⁴. In addition, under constructive engagement, the Heathrow airlines commissioned a study⁹⁵ into the efficiency of BAA's delivery of capital investment projects.
- 4.51 However, it should be noted that there are a number of practical constraints to the use of 'top-down' inter-airport benchmarking to identify the efficient level of operating or capital costs. In contrast to many utility businesses, there are considerable differences between the designated airports, and between these airports and other airports that might provide useful benchmarks. For example there are significant differences between the composition and age of the airport assets, the characteristics of passengers and the business models of the relevant airlines. International comparisons are further complicated by the wide variations in the ownership structures of airports, the range of services provided by the airport operator (as opposed to the other agencies at the airport⁹⁶) and the different operating conditions and financial reporting obligations.
- 4.52 After the last price control review, it was recognised that these difficulties combined to prevent the identification of a sufficient sample of comparable airports to enable a statistically robust comparison of overall efficiency. The CAA has, in response, adopted a more 'bottom-up' approach to benchmarking – focussing on specific operating processes where suitable benchmarks are more likely to exist⁹⁷.

⁹³ 'CAA's initial price control proposals – supporting paper III: airport efficiency assessments – overview and summary', Booz Allen Hamilton for the CAA, December 2006

⁹⁴ For a description of the key findings of the Scott Wilson report, see 'Supporting Paper X: advice to CAA on BAA's capital investment plans at Stansted Airport', Scott Wilson for the CAA, December 2006.

⁹⁵ For a description of the findings of the Currie & Brown study, see chapter 15 of 'Airports price control review – initial proposals for Heathrow, Gatwick and Stansted airports', CAA, December 2006.

⁹⁶ There is, for example, considerable variation in the allocation of responsibilities to provide the major operating functions of airports, such as baggage handling, security and airport air traffic control.

⁹⁷ For more information see the terms of reference set out by Booz Allen Hamilton in Supporting Paper III (*op cit*).

Potential reforms to the framework of economic regulation

- 4.53 The OFT's reference to the CC highlighted that economic regulation was one of a combined set of potential features that might have an adverse effect on competition. The CAA has highlighted the need to ensure that economic regulation is targeted and proportionate. One implication of this is that a change to the structure of the UK airport market might necessitate, or provide an opportunity, for a review of the regulatory regime that applies to UK airports.
- 4.54 Such a review could consider the general regulatory framework that might apply to UK airports, or it could focus on more incremental reforms.

Incremental reforms

- 4.55 The powers available to the CAA as an economic regulator of airports are more limited than those available to other regulators. There is, for example, no economic operating licence to which a regulator can attach conditions in pursuit of its statutory objectives. Unlike in other regulatory regimes, the functions of the CAA are tightly prescribed in statute. Once an airport has been designated by the Government the CAA has no option but to set price controls on particular charges and for a set period of time.
- 4.56 In particular, the current regulatory framework gives rise to a number of issues:
- whether the CAA should have the power to designate or de-designate airports for price control purposes since the decision on price control regulation is essentially an economic rather than a political one;
 - whether there should continue to be an automatic reference to the Competition Commission. The current automatic reference adds significant time and cost to the price control process and may incentivise parties to hold back evidence and opinion until that stage. The process could be modified, for example, through replacing the automatic reference with a right of appeal to the Competition Commission for the regulated airport;
 - whether the CAA's duty towards users should relate to the ultimate consumers (ie passengers) alone rather than to airlines and passengers as now; and
 - whether the CAA's concurrent powers to apply competition law should be extended to encompass airports as well as air traffic control services. There are arguments both for and against this. In its favour, there is a good case for combining competition law and regulation of airports in a single body to take advantage of the knowledge of the unique features of the airports market. On the other hand, there are practical resourcing issues around the capability of a relatively small organisation to manage the lumpiness and unpredictability of competition law casework.

Review of the general regulatory framework

- 4.57 More generally, there is an issue as to whether the Airports Act 1986 offers the CAA the requisite powers and tools to regulate effectively. As set out above, the CAA accepts that the airports regime has not kept pace with changes to other regulatory regimes. Despite that, it continues to operate reasonably effectively as an incentive-based regulatory regime.
- 4.58 If a general review of the current economic regulatory regime were to be contemplated, it would be necessary first to consider broadly the nature and scale of the harm that unregulated airports could do, and to design a proportionate – and flexible – public policy response. This response would need to reflect any other changes resulting from the CC's Market Investigation.
- 4.59 There are a number of potential approaches to economic regulation. Indeed, most regulatory frameworks rely, to some degree, on a mix of ex post and ex ante tools. Whilst the CAA has not undertaken a detailed assessment of the potential approaches to airport regulation, it is possible to highlight a number of approaches that have been adopted in other sectors and in the regulation of airports in other countries, including: price monitoring, potentially coupled with the potential for detailed price control regulation to be re-imposed⁹⁸; an appeals mechanism, such as the use of 'pendulum arbitration'; and ex ante regulation that is designed to increase the efficacy of existing ex post competition rules.

Conclusion

- 4.60 In light of the above, an assessment of whether the current regulatory framework is sufficiently flexible to deliver proportionate regulatory responses as circumstances change appears timely. The CAA would also support a more wide-ranging review of the scope of the existing regulatory regime as part of the Commission's work.

⁹⁸ For example, see 'The price regulation of airport services – Australian Government Productivity Commission Inquiry Report', May 2002.

Annex A. The CAA's statistical information

A.1 Traffic data from UK airports is collected by the CAA for publication on a monthly basis. Over 60 UK airports currently report to the CAA. The UK Airport operating statistics consist of data on:

- passengers,
- number of flights,
- mail and freight volumes,
- seats (calculated from a nominal average aircraft size).

A.2 Data in printed form go back to 1947. Data are electronically available from 1987. The latest provisional data are usually available 14 days from the end of the month; finalised data are available after about 7 weeks.

UK Airline data

A.3 The CAA collects traffic (monthly), fleet (quarterly) and personnel (annually) data from UK airlines for publication on a monthly basis. The UK Airline operating statistics consist of data on:

- passenger km flown,
- number of flights,
- seat km flown,
- available and used tonne km flown.

A.4 Data is collected by month, aircraft type, flight type (Scheduled or Charter, International or Domestic) and airline (note that this is not route level data).

A.5 Quarterly fleet, personnel and annual balance of payments data are also collected for the major UK carriers. For international scheduled flights only, quarterly sector and point-to-point data is collected, this information is required by ICAO.

A.6 Data in printed form go back to 1968. Data are electronically available from 1987. The latest data are usually available 10-11 weeks after the end of the month, and this timescale is improving.

Survey Data

A.7 Since 1968 a series of departing passenger surveys has been undertaken to obtain information about air travellers and the determinants of the travel market.

A.8 The surveys have included questions on journey purpose, final and intermediate surface origins/destinations, means of transport to and from airports, route flown,

country of residence and income. This information is used in assessing the type of market served by airports and consequently for forecasting air transport demand and for planning airport facilities.

A.9 The survey is carried out every year at Heathrow, Gatwick, Stansted, Luton and Manchester. Other UK airports are surveyed on a periodic basis, roughly every four years. The airports covered in previous regional surveys are:

- 2005: Aberdeen, Bournemouth, Edinburgh, Glasgow, Inverness, Leeds Bradford, Prestwick, Newcastle, Durham Tees Valley
- 2004: Birmingham, Bristol, Cardiff, Exeter, London City, Liverpool, East Midlands

A.10 Sample sizes range from around one interview per 1,000 passengers at the continuous survey airports to around 1 in 500 at the regional survey airports.

Scope of Departing Passenger Survey Data

A.11 The CAA Survey questionnaire can be divided into a number of distinct sections, each aiming to collect information on a particular topic. Put all this information together, and the result is a detailed picture providing an insight into how the air passenger perceives and uses services offered them throughout UK airports. Below are listed some of the more popular areas included on the questionnaire and the types of questions that are included.

- Network Development
 - Original worldwide airport
 - First interline worldwide airport
 - Departing UK airport
 - Immediate worldwide airport
 - Final worldwide interline airport
 - Departing flight numbers are identified with code share option
- Origin & Destinations
 - UK home - planning region, county, district
 - UK origin (non home) - planning region, county, district
- Ticketing & Yield
 - Ticket type (single or return)
 - Ticket class (first, business, economy etc)

- Ticket cost & currency
- Demographics & Classifications
 - Age
 - Sex
 - Flight (scheduled or charter)
 - Time, day, month of interview
 - Journey purpose categories
 - Family size
 - Children
 - EG classification
 - Income
- Surface Access
 - Arriving mode of transport (3 separate connecting modes)
 - Journey time
 - Group size
- Marketing Approach
 - Frequency of travel
 - Trip duration

Other Aviation Data Sources

A.12 In addition to the data set out above, the CAA can provide the CC with a summary of other sources of aviation-related data upon request.