Regulation of capacity investment at Stansted Airport

A REPORT PREPARED FOR EASYJET

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Tables & figures

Executive summary

1 An airport that can be demonstrated to have significant market power is likely to be able to charge excessive prices to its customers, the airlines over the long run. Such a situation is clearly undesirable and leads to the conclusion that economic regulation needs to be put in place to restrict the extent of the airport's charges and ensure that it cannot abuse its dominant position.

2 Under current UK legislation, airports found to have significant market power are "designated" and their maximum charges determined on a five-yearly basis by a combination of the Civil Aviation Authority and the Competition Commission.

3 The recent decision of the Secretary of State for Transport has confirmed Stansted Airport's position as a Designated Airport[1]. This means that the CAA has begun the process of determining maximum airport charges for Stansted for the next five years.[2]

4 Nevertheless it is widely accepted that there are significant limitations with the existing system of price regulation with regard to the process of infrastructure investment. In particular CAA has had great difficulty in identifying the efficient level of costs on a forward-looking basis to include in price caps. Furthermore, attempts to resolve this situation through "constructive engagement" between the BAA and the airlines have not been a success.

5 Against this backdrop, and despite the opening of T5 at Heathrow, capacity at the system of London Airports has consistently failed to keep pace with the growth in demand for air travel. In a recent report by Frontier[3] we identified that the scale and apparent indivisibility of airport investment creates an incentive for airport operators to under-invest in capacity so as to increase the extent of their market power.

6 The purpose of this report is to explore options for the continued regulation of Stansted Airport that address:

- the scope to increase intra-airport competition and so reduce the need for direct price regulation to solve all the airport's pricing and investment decisions;
- the need to make airport investment more flexible and responsive to the requirements of its customers, namely the airlines; and
- the continued need to control overall charges so as to guard against the risk of a dominant position being abused.

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1 Department of Transport (2008), 'Decision on the regulatory status of Stansted Airport', January.

2 CAA (2008), 'Price control review – consultation on the framework and options for the economic regulation of Stansted Airport', January.

3 Frontier Economics (2007), 'The De-designation of Stansted Airport: A report prepared for easyJet', October.

7 For simplicity, and given the context in which this report is being prepared, the report is addressed specifically to the question of regulation at Stansted Airport. However, it is our view that the ideas presented here are generally applicable and beneficial to any airport with market power, provided the relevant authorities have the will to implement the necessary structural and legal changes that may be required.

The problems of the current system of regulation

8 In this report we identify the difficulties that the existing system of regulation has had in promoting an efficient degree of capacity development at Stansted Airport (and at the other BAA airports).

9 Price cap regulation as it presently exists requires CAA to become embroiled in determining the efficient provision of terminal facilities at Stansted and what these should cost in an efficient world. The lack of suitable benchmarks from other airports makes this regulatory problem particularly difficult.

10 Furthermore, in our view attempts to seek general agreement between BAA and the airlines collectively through what CAA has termed "constructive engagement" are unlikely to succeed because of the way the regulatory system allocates risks between the airport and the airlines. These problems have been exacerbated by the willingness of the regulators to allow BAA to obtain pre-financing of its investments in price caps despite the fact that firms in competitive markets cannot factor unfinished assets into their prices.

Overview of proposed regulatory approach

11 In light of these observations we have sought to present a new approach to regulating Stansted Airport that:

- explores the dividing line between the true natural monopoly elements of airport services and those that can be opened to competition;
- increases the divisibility and flexibility of airport investment so as hopefully to provide individual airlines with facilities that better fit their individual needs and business models;
- apportions the risks of airport development more efficiently between the airport operator and its airline customers.

12 The basic structure we propose is summarised in Figure 1 below.

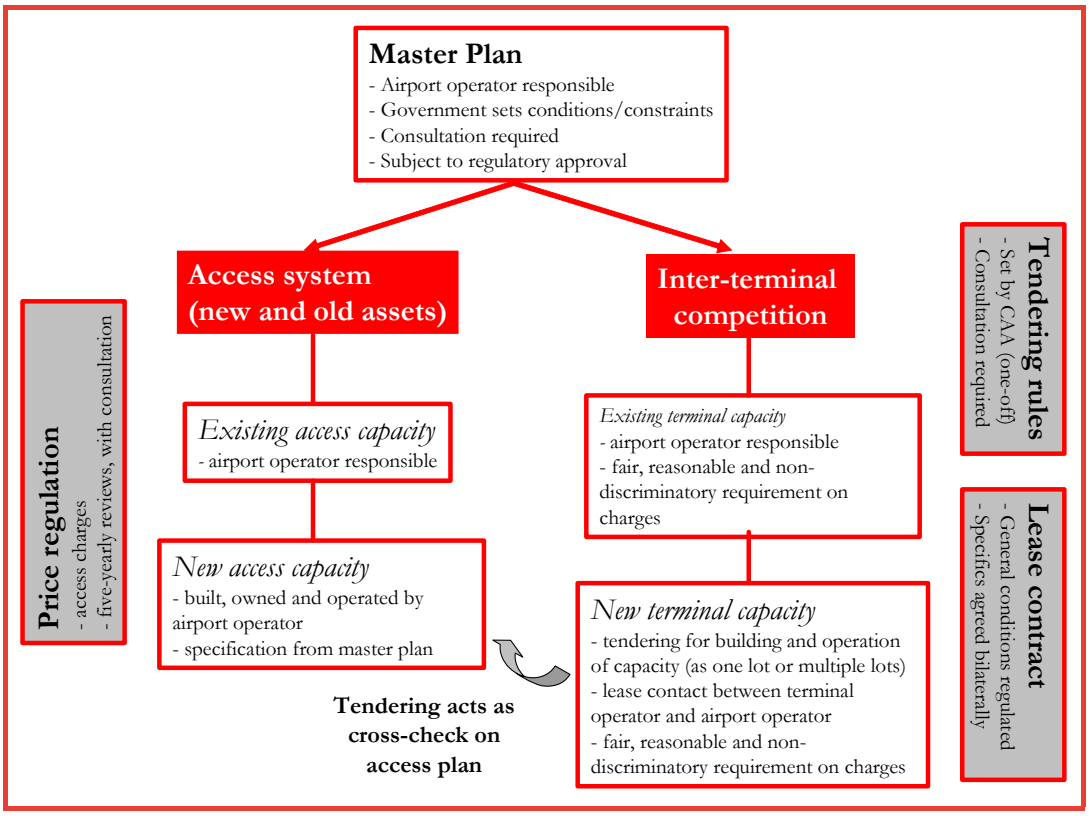

Figure 1: Outline of proposed approach

13 Under this approach, we propose that the provision and operation of terminal facilities be separated from the provision of the monopoly access services of runways, taxiways, aprons, etc..

14 A combination of competition by tendering for the right to build terminal facilities, and competition *between* terminals to offer services to airlines can be used both to constrain charges and to make the delivery of airport facilities more responsive to the needs of passengers and the airlines that serve them.

15 As we show in the report, the system of tendering and the form of the lease contracts to operate terminals can be structured in such a way as to protect airport users and promote competition, thus removing the need for the CAA to separately regulate the prices charged for terminal services.

16 The monopoly access assets like runways, taxiways and aprons would remain under the direct control of BAA. Price regulation would have to be retained to ensure that BAA did not generate excessive returns on these assets over the long-term. Nevertheless, under the approach proposed here there would be an opportunity to greatly simplify the way in which price regulation is applied on these assets, compared to the existing system of RPI-X regulation.

17 Overall coordination of the development of the airport would remain in the hands of BAA, which would be responsible for the maintenance of the airport's Master Plan, subject to suitable oversight by the CAA.

18 In this report we carry out a detailed evaluation of our approach, considering:

- the impact on investment incentives;
- the need to control BAA's ability to use its dominant position to generate monopoly rents;
- appropriate risk-sharing between BAA, other terminal operators and airlines using Stansted;
- the effect on inter-airline competition;
- operational feasibility; and
- the costs of regulation.

19 Our analysis shows that our proposal delivers more benefit against these criteria than CAA's existing approach. In particular, the proposed approach:

- delivers, through the use of a tendering process, efficient incentives for new capacity investment (runway and terminals), consistent with market requirements;
- ensures efficient provision of terminal services at existing and new terminals, with BAA and other terminal operators constrained by inter-terminal competition;
- has low regulatory costs over time, with market forces constraining the terminal operator and the provider of access facilities where possible; and
- improves the determination of price controls, by reducing the scope of the control and providing an opportunity to revise the methodology for calculating the control.

20 In our view the proposed model is feasible to implement from an operational and regulatory perspective. This is demonstrated by the fact that there are many examples of airports, particularly in the US, where terminal facilities are separated from other airport facilities, and third parties (mainly airlines) build and operate the terminals under long-term lease arrangements. There are also examples of tendering being used successfully to identify the preferred terminal operator (under a build-operate-transfer contract).

21 Evidence from around the world proves that the model proposed here is operationally feasible, a market for providing terminal services exists and regulatory costs need not be significant (in particular the regulator does not get involved in the day-to-day operation of the airport). There is also evidence that airlines can be involved in the provision of terminal services, without the creation of barriers to entry, provided there is sufficient spare terminal capacity and that the contracts involved require some capacity to be sub-leased to other operators.

Implementation issues

22 In this report we consider six key aspects of the implementation of our approach. Specifically:

- the design tender rules for terminal facilities;
- who should be allowed to participate in the tender process;
- how winning bids should be chosen;
- the form of the lease contract that would have to be established between the terminal operator and BAA;
- how to set the price control for the remaining monopoly assets; and
- the role of CAA in monitoring tender processes, and lease contracts and applying price controls to the monopoly assets.

23 Our analysis shows that there are many different options that could be applied at each stage of the implementation each with their merits and difficulties. Given the initial nature of this paper we do not consider it appropriate for us to be prescriptive about which options should or should not be adopted. However we show that these issues can be resolved and that it is possible to design an efficient process that aligns BAA's incentives with the need for efficient infrastructure investment.

24 The role and behaviour of BAA, CAA and airlines in the tender process, and subsequent operation of access and terminal facilities at the airport, will be constrained by the rules of the tender process, the design of the lease contract and the price control methodology. It is possible to tailor the rules to ensure that any concerns relating to the behaviour of any of these parties are managed. For example, the lease contract can include a clause that requires airline owner to provide third-party access to a proportion of terminal capacity to limit the risk of foreclosure in the airline market. Competition law would be expected to also apply to all parties involved with operations at the airport.

25 The details of how the tender process would be implemented are likely to vary by airport and/or the type of capacity investment that is proposed. There is therefore value in developing a flexible framework rather than being prescriptive about a number of detailed issues. The process would only need to be designed once and could then be rolled out over time for future expansion or for application at other airports.

Remaining need for price controls

26 Our proposed approach also provides an opportunity to review the scope of regulated charges at Stansted and revise the methodology used to determine price controls where needed. Price controls, as calculated by a regulator, would not be required for terminal facilities provided inter-terminal competition exists.

27 Charges for use of the access system (runways, taxiways, etc.) would still need to be regulated however. These charges would ideally be computed on a long run average incremental cost (LRAIC) basis, which is closely related to a project

finance charge on a per-passenger basis for provision of access facilities. As identified in our earlier report, provision would have to be made for the fact that access charges could vary significantly from this LRAIC figure in any one year depending on the extent of capacity constraints. However, we see no difficulty in producing a rolling mechanism to account for the varying of charges over time, as the existing price control already contains similar provisions.

Next steps

28 The discussion in this report is intended to provide a basis for further debate on the proposed approach to regulating airport capacity, highlighting the benefits of our proposal relative to the current regime.

29 Going forward, it would be desirable for the focus to be on developing options for ensuring that the benefits of the framework are maximised. In particular, further analysis of the precise design of the tendering framework is required (i.e. a consideration of the costs and benefits of different design options).

30 It is expected that the review of regulation at Stansted Airport, and the concrete proposals for capacity expansion there, provide the first opportunity to test our proposed approach. However, the proposals to separate access and terminal facilities, tender terminal capacity and create inter-terminal competition could be applied equally to other airports where there is spare capacity. Indeed, we have found, with some degree of uncertainty, that the required level of spare capacity may be around 10% for inter-terminal competition to be effective. Going forward, it will be important to review other opportunities for applying and developing the framework.

1 Introduction

31 Plans for capacity expansion are currently underway, or under consideration, at the Designated Airports in the UK. In particular, Stansted Airport has recently submitted plans for the construction of new runway and terminal capacity (SG2). This reflects current capacity constraints and the expectation of increased demand going forward.

32 However, there is a genuine concern that the current approach to regulation does not provide appropriate incentives to deliver capacity investment in a timeframe, and to a design specification, that is consistent with airline (and passenger) demand. The 'constructive engagement' approach proposed by the Civil Aviation Authority (CAA) has failed to deliver an agreement between airlines and Stansted airport on the design of runway and terminal capacity plans. This reflects the fact that there is a mix of airlines, with varying requirements, and the approach does not allow for the heterogeneity of demand to be adequately taken into consideration.

33 In addition, a number of Government and regulatory reviews are underway and we believe that these provide the opportunity for a new approach to regulation to be developed[4]. Some high level ideas on how regulation might be revised were provided in our previous report on the de-designation of Stansted Airport[5]. These are expanded on in this report, and brought together into a coherent framework for regulating airport capacity investment.

34 There are four dimensions to our proposed approach:

- bottleneck facilities (access to the airport and terminals) would continue to be regulated through a price control framework;
- the right to build and operate terminal facilities (non-bottleneck facilities) is opened up to competitive tender;
- the tendering process for terminal capacity provides a cross-check on the market demand for the runway capacity; and
- inter-terminal competition arises as a result of the tendering process.

35 Our proposed regulatory framework encourages investment in new capacity (runway and terminal) that is consistent with market demand. The proposal also encourages the long-term efficient provision of terminal facilities (through inter-terminal competition). Furthermore, the proposed approach provides the opportunity to review the methodology for calculating the price control applied to the core access capacity assets.

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4 Competition Commission, 'BAA Airports inquiry'; CAA, "Price control review – consultation on the framework and options for the economic regulation of Stansted Airport', January.; and the Department of Transport, 'Strategic Review of the Civil Aviation Authority'.

5 Frontier Economics (2007), 'The De-designation of Stansted Airport: A report prepared for easyJet', October.

36 The proposed airport structure, where competitive services (terminal facilities) are provided over a regulated monopoly network (airport access), is similar to the structure adopted in a number of other regulated sectors. Our proposal is also consistent with CAA's expressed desire to introduce an increased role for market forces in the provision of airport services.

37 This report is being published to coincide with the timetable for providing responses to CAA's consultation on the framework for regulating Stansted Airport. It is therefore written with the new capacity investment proposals at Stansted in mind. However, the general framework – i.e. separating access and terminal facilities, regulating the former while allowing inter-terminal competition for the latter – could be applied at any airport where there is overall market power but sufficient opportunity, because of the existence of spare capacity, for airlines to switch between terminals. The competitive constraint can arise because of spare capacity within existing terminals or through the fact that there is unused land at the airport that could be used to provide alternative terminal capacity in the future. In both cases, it is the fact that an alternative operator could provide terminal services to an airline that will constrain the behaviour of existing terminal operators.

38 The remaining structure of this report is as follows.

- In Section 2 we describe the problems that exist with the current approach to regulation, focusing on concerns relating to the level, timing and design of capacity investment decisions.
- In Section 3 we present our proposed regulatory framework that encourages efficient new capacity investment and encourages efficient provision of terminal facilities over time, through the existence of inter-terminal competition. We present evidence from other airports to demonstrate that it is feasible to separate facilities into those that are and are not bottleneck facilities, and to allow parties other than BAA to provide terminal facilities.
- In Section 4 we explain how the proposals could be implemented, providing details of how the tender process could work and explaining how access prices could be regulated. A number of different options are presented, reflecting the fact that the debate on the appropriate design of this regulatory approach is at an early stage.
- In Section 5 we discuss a number of concerns that CAA has raised about the regulatory approach that includes tendering for terminal facilities and the creation of inter-terminal competition. We explain how these concerns could be addressed through the design of the tendering process, associated lease contracts and the price control.
- In Section 6 we present a brief summary of our conclusions.

2 Problems with current investment regulation

39 The system of regulation currently applied to the Designated Airports is similar to the system of regulation applied to other network industries in the UK, including electricity transmission and distribution, gas distribution and water supply.

40 This system is based on the "RPI-X" price control approach. In broad outline this system fixes the maximum rate of increase in charges that will be permitted over the forthcoming five year period. In other sectors this approach to regulating monopoly services has produced significant improvements in operating efficiency combined in many cases, most notably water and sewerage services, with a substantial increase in investment in infrastructure relative to the levels of investment achieved before the sector was privatised.

41 In contrast, in the case of airports it is widely perceived that RPI-X regulation as it has been applied to the Designated Airports has not been an outstanding success in delivering infrastructure investment. One particular problem is that while the regulated airports have invested substantial amounts in expanding capacity, it is perceived that this capacity has been too little, too late for the development of the air services in the London area. It is certainly the case that twenty years after privatisation London's airports are more congested than they were when they were in public ownership.

42 While recognising that demand for air travel has risen significantly over that time, capacity has not kept pace with the demands of this growth, hence the increasing congestion. Furthermore, it cannot be argued that this situation has come about as a result of an unexpected surge in demand for air transport catching the developers of capacity by surprise. Figure 2 below illustrates the long run relationship between the growth in demand for air transport and the growth in GDP.

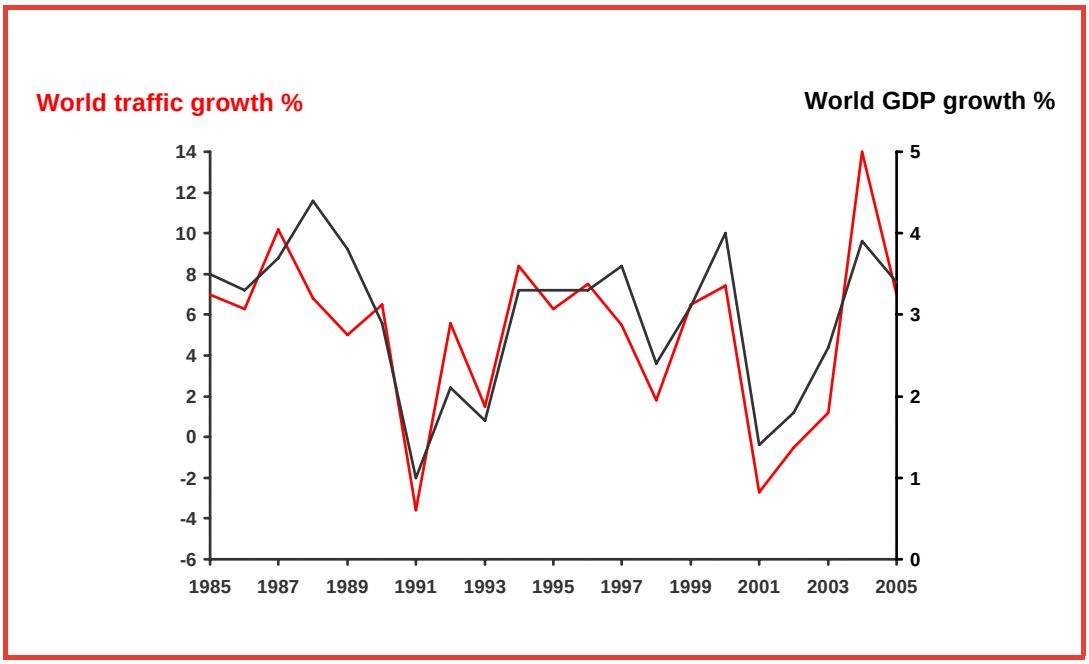

Figure 2: Aviation growth is correlated with GDP growth

Source: ICAO, Global Insight

43 It is often thought that liberalisation of air transport in the 1990s, which led to the growth of low cost carriers, also led to an acceleration in demand for air transport in general. But Figure 2 demonstrates that this is not the case. The long run trend in aviation growth is about twice the rate of growth of GDP and has not changed significantly in the last fifteen years.

44 There are of course a number of factors that have contributed to increased airport congestion, including the exhaustive planning process that is required before new airport capacity can be built. But the planning process cannot be held to blame for this situation. Airport operators and regulators need to work within that framework and plan ahead accordingly.

45 But even setting aside planning issues, there are many other impediments to the effective development of new airport capacity.

46 First, as argued in our recent report on the de-designation of Stansted Airport, rival airports may have an incentive to drag their heels over capacity investment. This is because capacity constraints enhance their market power. But this incentive to under-invest exists because the lumpiness and indivisibility of airport investment means that one airport can choose its level of investment knowing with a great deal of certainty that its rival's capacity is fixed for a significant period ahead.

47 In addition, the regulatory regime itself may act to reinforce the tendency to under-invest relative to the growth in demand. Some of these problems are inherent in price cap regulation, some derive from the specific challenges presented by trying to regulate airports under a standard RAB-based approach,

Problems with current investment regulation

and some derive from the way in which the interests of airports and airlines diverge under the price cap regime as applied in this case.

2.1 PROBLEMS INHERENT IN PRICE CAP REGULATION

48 The problem starts with the role required of the economic regulator (in this case a combination of the CAA and the Competition Commission) under the current regime. It is a known difficulty under price cap regulation to identify the efficient level investment to be undertaken and then to induce the regulated company to carry out that investment. If the regulated company can capitalise within its Regulatory Asset Base (RAB) all investment that it carries out then it may have a strong incentive to over-invest in both quantity and quality terms, relative to the level that best benefits its customers.

49 On the other hand, if the regulator fixes the level of investment that will be capitalised in the RAB, regardless of the level actually spent, then the regulated company has a strong incentive to be efficient, by reducing investment costs. But without any constraint regarding the *outputs* the company is expected to generate from its investment the incentive to over-invest is replaced by an incentive to cut costs not simply by being more efficient, but also by delivering less than was envisaged in the original regulatory settlement.

50 Consequently regulators in price cap regimes find themselves drawn into the process of specifying the level of outputs that the regulated company is expected to deliver during the period in question as well as identifying the efficient level costs that should be needed to deliver those outputs.

51 The process of identifying the appropriate levels of output is never straightforward. Experience from other sectors shows that regulators use a mixture of new statutory requirements and submissions from the regulated companies, based on feedback collected by those companies on customers preferences to establish an appropriate level of outputs for the forthcoming period.

52 That however leads the regulator to the second problem: how much is it reasonable to allow in spending limits for these new outputs? The process usually adopted involves various sorts of benchmarking, using statistical models or comparisons of the costs of similar companies elsewhere, to determine the appropriate spending limits.

53 In the case of airport regulation the CAA has attempted to use both consultation and benchmarking at Stansted to identify the appropriate level of investment, without conspicuous success.

54 The CAA has always encouraged the regulated airports to seek feedback and support from their customers, the airlines, for particular investment plans. Historically, however, the airlines have criticised BAA for its perceived

unwillingness to consult them on its investment plans[6]. During the latest price review period the CAA attempted to formalise the process of getting customer approval for airport expansion plans through a scheme that was referred to as "constructive engagement". But the experience of this approach has been that airlines feel it has been no more effective in practice than previous attempts to get BAA to listen to its customers regarding its investment plans. This is perhaps not surprising when the "constructive engagement" does not change the structural imbalance between BAA and its customers. It is recognised BAA enjoys a dominant position with regard to the London Airports. Dominant positions cannot be circumvented by customers attempting to negotiate with the dominant supplier, because there is no reason or incentive for the dominant party to give way.

55 Finally, in addition to the problems of constructive engagement, CAA has found it very difficult to use benchmarking techniques to identify the efficient cost allowance that should be made.

2.2 PROBLEMS SPECIAL TO THE AIRPORT SECTOR

56 The problems identified above are neither surprising given the nature of airport investment, nor are they of the regulator's making if we take the price cap system in its broadest sense as a given.

57 Airports differ from other assets regulated under an RPI-X regime in two crucial ways. First, the investments in capacity being contemplated are often very large relative to the existing size of the regulated asset base (e.g. Heathrow has a 2006/07 closing RAB of £8.4bn[7] and investment at T5 is expected to cost £4.2bn[8]; in the water industry the regulatory capital value for 2006-07 was £43.8bn and average annual capital investment is £3.9bn[9]).

58 In the case of the network utilities the average rate of price increase depends on the investment programme at the margin, but not to anything like the same degree as is the case with airport investment. Consequently the decision over the efficient scale of investment and its cost are much more contentious issues with customers (namely the airlines) in the case of airports than in other network industries.

59 Secondly, the process of benchmarking the cost of airport investment is arguably more difficult in the case of airports than in any of the other sectors to which price cap regulation is applied. This results from several factors.

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6 It should be noted however that this is not a complaint that is unique to BAA or to regulated airports. Airlines around the world can frequently be heard complaining that the major airports they use do not consult them properly about their investments.

7 CAA (2008), 'Economic regulation of Heathrow and Gatwick Airports 2008-2013', CAA Decision, March.

8 Heathrow –Airport-UK.info

9 Ofwat (2007), 'Financial performance and capital expenditure of the water companies 2006-07

- Airport designs, particularly terminal designs, vary so enormously that it is difficult to establish useful benchmarks regarding how much these assets should cost. Part of the reason for the enormous variation in design may reflect changing views over time as to what airports or airlines want from a terminal. On the other hand many airport facilities have been designed with broader objectives than meeting passenger demand in mind (e.g. some may have been built as landmark buildings acting as expressions of civic pride). Consequently the costs of these facilities may not act as useful benchmarks for identifying the efficient costs of airport capacity.
- Comparator airports are almost always state-owned and operated. As a consequence investment at those airports may not have been carried out efficiently, because the incentive for cost efficiency was not present.
- State-ownership may mean that historically the cost division between the airport and the authority owning it may not have been completely clear. Consequently the costs that are attributed to those airports may not be a true and accurate reflection of the total investment in the airport.
- Airport design varies across a number of different dimensions, all of which have different impacts on costs. It is difficult to undertake comparative analysis that can capture all of the dimensions effectively.

2.3 PROBLEMS RELATED TO THE WAY IN WHICH PRICE CAP REGULATION HAS BEEN APPLIED TO UK AIRPORTS

60 Notwithstanding the difficulties in identifying the efficient costs of airport development, it is necessary to consider why the engagement between the regulated airports and their customers has consistently failed to reach agreement about the scale and cost of airport investment. If this were simply a problem with the regulation of BAA, but did not arise elsewhere, then perhaps it could be attributed to difficulties with one or other of the specific parties in the UK negotiations. But this is not the case. Other airports have also suffered significantly from the difficulty of getting the airport and its major users to agree over the scope and cost of airport expansion. This suggests that the problems may be inherent to price cap regulation.

61 In our view there are a number of structural problems that make it likely that airports and their customers will be unable to reach agreement on these issues under the existing regime.

2.3.1 Price setting process under RPI-X

Cost allocation over time

62 The first problem relates to the way in which maximum airport charges have historically been derived under the current regulatory system.

63 Once the costs of delivery of outputs have been estimated by CAA, the maximum price that can be charged over the following five years has typically

been calculated by spreading the costs forecast to be incurred over the period across the expected passenger movements for the same period. But the consequence of this approach is that the price airlines are asked to pay does not follow the path that would be expected in a competitive market. In a competitive market it is to be expected that a low price will be charged for use of an asset when it is expected to be under-utilised; close to short-run marginal cost. As the asset becomes congested, the airport will be able to recover its capital costs as prices rise to, or even above, long-run marginal cost[10]. By contrast the current regulatory approach tends to produce a pattern of charges over time that follows the opposite path: starting high and declining as demand increases. The reason for this is that the costs recovered under the regulatory scheme in each five year period reflect accounting costs, including typically straight-line depreciation on assets, rather than economic depreciation, which would reflect the pattern of usage of the assets over time.

64 A stylised example of the effect this has on prices and revenues is given in Figure 3 and Figure 4 below.

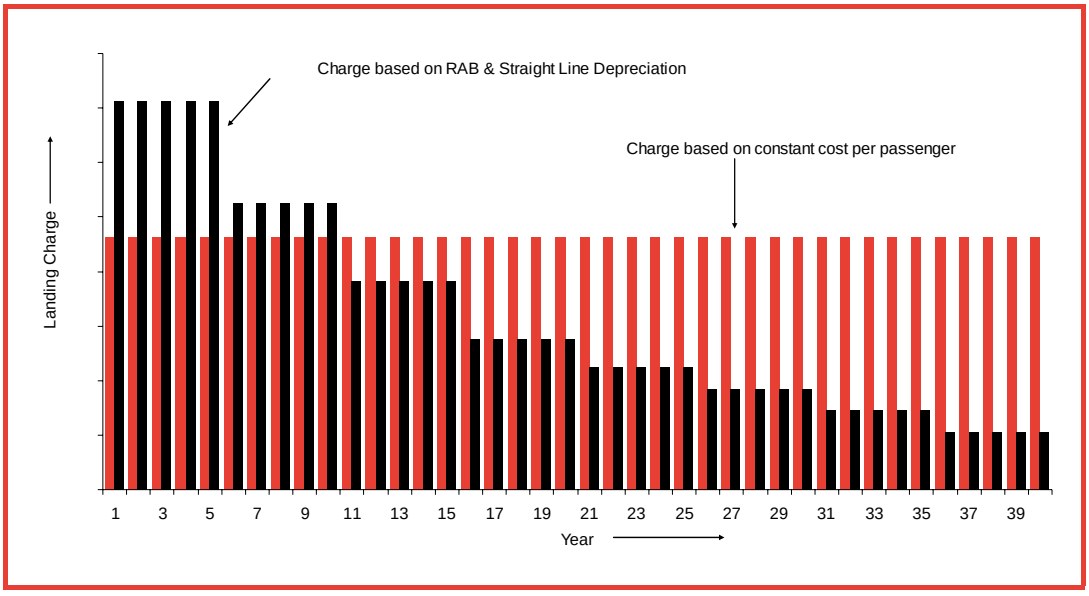

Figure 3: Comparison of RAB-based prices and constant prices per passenger

10 For a more extensive discussion of this issue, see Frontier's report on the De-designation of Stansted Airport.

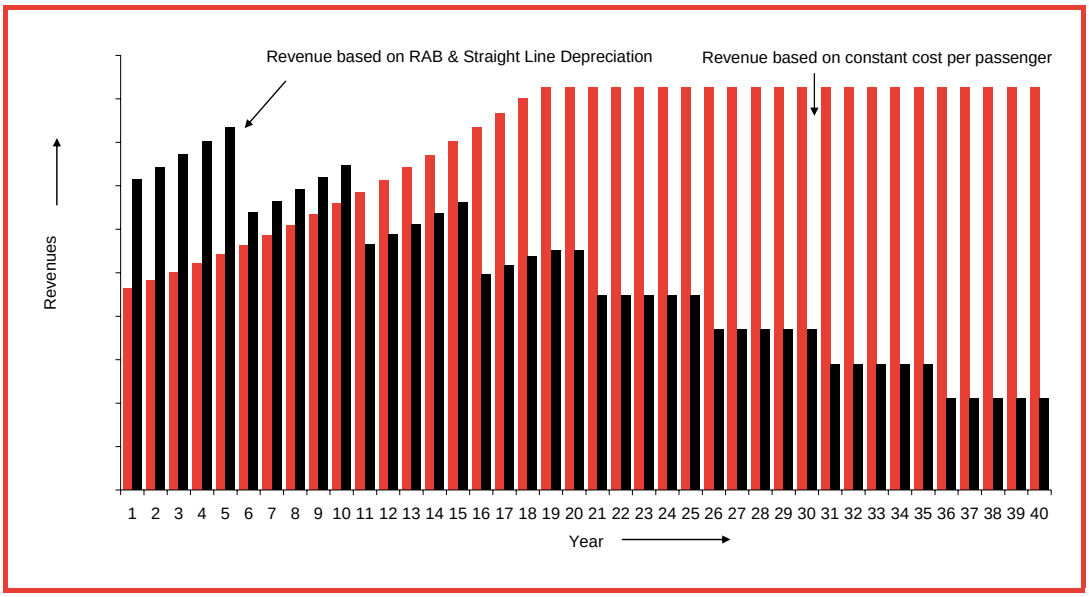

Figure 4: Revenues implied by RAB-based or constant prices per passenger

65 The consequence of this mismatch is that new investment presents airlines with increases in costs in the short run that are inefficiently high given the economics of airport services. This has the effect of shifting an excessive burden of risk for the financing of long term assets from BAA to the airlines that happen to be operating services at the time the capacity is built. This in turn acts as a disincentive for airlines to agree to capacity expansion, because it leads to immediate short run increases in prices regardless of whether such an increase is justified on commercial or economic grounds.

66 The disincentive for airlines to support capacity development under these circumstances is exacerbated by the fact that airline costs of capital will be significantly higher than that of Stansted Airport. Thus the financial cost for the airlines of accelerating payment for assets is greater than any benefit the airport itself can gain from doing so.

67 We note that this timing problem has been recognised by the Irish airports regulator CAR and has been addressed via a 'unit cost' method for recovering the costs of Terminal 2 at Dublin Airport. In the most recent review of charges (2007), the regulator emphasised that all passengers that benefit from the terminal (over time) should make 'roughly the same' contribution to capital expenditure[11]. This objective is achieved by introducing a constant unit cost rule for recovering capital expenditure that allows for depreciation charges that are lower (higher) than under a straight-line approach in the early (later) years of the terminal being in operation. Revenue is then lower in periods when demand is low and higher as capacity is used up (i.e. when demand is high).

11 Commission for Aviation Regulation (2007), 'Maximum Level of Airport Charges at Dublin Airport: Final Decision on Interim Review of 2005 Determination', Commission Paper 6/2007, July.

Pre-financing

68 This problem with the application of price cap regulation has been exacerbated by a second feature of the way price cap regulation has been applied to airports, namely the allowance in airport RABs for the pre-financing of airport assets.

69 In competitive markets companies cannot charge for goods and services they do not yet provide. The same should be true of airports, but since the 1996 review CAA, and the Competition Commission, has allowed for a full return to be earned on assets in the course of construction, with Terminal 5 at Heathrow being the largest example of investment falling into this category. These assets are not included in the calculation of the depreciation charge until they become operational. The main rationale appears to limit regulatory risk associated with the large scale investments and to thereby assist with the provision of financing and to lower the cost of financing. The Competition Commission have also argued that it limits price volatility over time. However, a number of airlines have raised concern about the impact on incentives to actually deliver the investment at a cost level, and within a timeframe, that is consistent with plans and market expectations. CAA recognises that this may be a problem but argues that these can be managed through adjustments for non-delivery of outputs and identified triggers for when the capital investment included in the RAB, and are offset by the greater risks associated with deferring the return earned.

70 In our view the cost of allowing pre-financing in the airport's RAB is that it exacerbates the incentive on airlines to resist most plans for major expansion. Airlines will be reluctant to invest on that basis because they are being asked to pay the cost of facilities they are not able to use. As with the previous problem, pre-financing leads to an unacceptable shifting of financial risk for investment from the airport to the airlines currently using its services.

71 Again, the Irish airports regulator, CAR, has taken an alternative approach to financing long-term capital investment. Specifically, the majority of capital investment associated with Terminal 2 at Dublin will be included in the RAB when it is completed. A case can therefore be made for considering alternative treatments of capital investment within the price cap framework.

"One size fits all"

72 The third issue that may obstruct the ability of airports and airlines to come to an agreement over airport expansion capacity relates to the difficulty BAA has under price cap regulation of offering differentiated capacity to airlines that have different requirements.

73 In truth as far as we understand there is nothing in the existing regulation of BAA that prevents it from developing terminal capacity tailored to the requirements of specific airlines. Indeed significant investments (such as T5 at Heathrow and T4 before it) have been undertaken with a specific airline user in mind.

74 However the inclusion of the terminal investment in the airport's RAB means that in effect *all* airlines are expected to pay at the margin for the next tranche of

capacity, regardless of whether that capacity is specified in the way the individual airline would choose.

75 As a consequence all airlines will have a reason to be unwilling to sign up to specific capacity plans because of the likelihood that those plans do not meet the business model of any particular airline.

2.4 TOWARDS A SOLUTION

76 The remainder of this paper describes an alternative approach for regulating airports with market power that mitigates the problems that have been identified here. In particular, we have a number of objectives as set out below.

- To explore the dividing line between the true natural monopoly elements of airport services and widen the scope of competition and market testing for those facilities where it is appropriate.
- To increase the divisibility and flexibility of airport investment. This should have two benefits. Greater divisibility of investment reduces the inherent tendency of airports to constrain capacity to enhance their market power. Furthermore, increasing the flexibility of service provision within an airport is hoped to provide individual airlines with facilities that better fit their individual needs and business models.
- To apportion the risks of airport development more efficiently between the airport operator and the airline customers.

77 Where the need for regulation persists we would hope to identify better rules for applying long-term pricing signals to these assets so as to align the interests of airports and their airline users.

3 Increasing the scope of intra-airport competition

78 In the previous section we outlined the difficulties and limitations of the existing system of price regulation applied by CAA at Stansted Airport. Here we move on to consider an alternative approach that better balances the roles of regulation and competition at Stansted. As noted in the Introduction, the proposed approach (in particular the creation of inter-terminal competition through the separation of regulated access facilities from competitive terminal facilities) could also be applied to other airports.

3.1 THE BENEFITS OF GREATER INTRA-AIRPORT COMPETITION

79 A market should be regulated only where necessary. This is consistent with the Government's Principles of Better Regulation. We have therefore developed a framework for regulating airport capacity that limits the scope of regulation to areas where the market is not expected to constrain the pricing of BAA. Competition for the market, through a tendering process, will allow the market to constrain all other aspects of service provision at the airport. Furthermore, inter-terminal competition, that arises when there is more than one provider of terminal services within an airport, provides long-term constraints on service provision.

80 In our view, even if there are constraints on the building of new airports, it is feasible to partly liberalise the airport sector by allowing third parties to build, own and/or operate key facilities within existing airports. This would be appropriate for capacity that is not considered to be a bottleneck at the airport. In this regard a distinction can be made between access facilities, such as runways, taxiways and ground access to the airport (the bottleneck) and terminal facilities (which are non-bottleneck facilities).

81 At present, under the existing regulatory structure, BAA as the "Airport Operator" defined in the Airports Act (1986) is the sole provider of both access and terminal facilities at all of its airports. But this structure is neither essential nor necessarily beneficial to the efficient development of these airports.

82 In particular, the involvement of third parties in the development and/or operation of terminals could bring significant benefits. This involvement could cover terminals in whole or in part, piers within terminals, individual gates or groups of gates. The proposals for runway and terminal capacity expansion at Stansted provide a useful test case for implementing our proposals, as the opportunity has been created to introduce new parties into the operation of the airport as it expands. However, as emphasised earlier, key elements of the proposals could be considered for other airports where there are no current plans for expansion. In particular, access and terminal facilities could be separated and inter-terminal competition could be effective so long as there is a credible threat of airlines switching to another terminal operator (which requires some spare capacity for the provision of alternative terminal services in the airport).

83 Removing the "monolithic" approach to developing facilities at the airport reduces the incentive for BAA to increase its market power by dragging its heels over capacity expansion. As we have argued in our previous report on the de-designation of Stansted, if airport capacity can be expanded in a flexible and timely way then the incentive to expand capacity to meet demand and face competition from other airports is increased.

84 Involving players other than the existing airport operator, in the provision of terminal facilities could be expected to result in a more efficient delivery of required additional terminal capacity. Ultimately, the market would determine the appropriate scale, design and timing of terminal capacity, reflecting the needs of passengers. Competitive pressures would also be expected to improve the service provided at existing terminals, as airlines have the opportunity to shop around for the best 'deal' amongst different terminal operators.

85 Direct contracting between terminal providers and the airlines could also allow both parties to tailor the services being offered and the price for those services to the needs of the particular airline in question, reducing the "one size fits all" problem identified in the existing regulatory regime.

86 Also, by allowing third-party developers to contract directly with airlines or groups of airlines to provide terminal facilities it may be possible to remove the issues of the design and cost of these facilities from the CAA's regulatory problem, thus greatly simplifying the price-setting task that it faces.

87 Conditions would need to be put in place to ensure that the benefits of market power were not still captured by BAA, through charges made to terminal providers, or captured by the terminal providers themselves. For the latter condition to hold, it would be necessary to ensure that there was genuine competition *between* terminal facilities, so that airlines have a choice over the services that they buy. Thus sufficient spare terminal capacity needs to exist to allow airlines to exercise choice, at least at the margin, over from whom they buy terminal services. This spare capacity could be within a terminal, with a requirement to provide access of unused capacity to third parties, or across terminals (i.e. a terminal operating at full capacity is constrained by a second terminal that has spare capacity), or it could relate to unused land at the airport where there is an underlying threat of entry by a new terminal operator.

88 Clearly if such a proposal were to work there are many practical details that need to be resolved. Much of the rest of this report represents a first attempt to identify and discuss these practical issues.

89 However, the key fact to note is that the idea of separating ownership and operation of the airport's access facilities from its terminal facilities cannot be dismissed as impractical or theoretical. As we show in this report there are many examples around the world of airports where terminal facilities are provided by different organisations from the operator of the runways, etc.. Furthermore, it is frequently the case that terminal facilities are provided in competition with each other, thus intra-airport competition can be made a reality if there is sufficient will to do so.

Increasing the scope of intra-airport competition

90 Finally, we note that were these suggestions to be applied at Stansted it would not mean the end for the need for economic regulation.

91 Regulatory involvement would be required, at the outset, to determine how the liberalisation process would work and, as has occurred in other sectors, to monitor the market after entry. Price control regulation would also continue to be required, but on a smaller scale, for access facilities. Once designed, the tendering process will not be difficult to implement and could be replicated over time and across airports. Regulation would still be required, but the costs would be limited

92 In the following section we set out in more detail the structure of the regulatory approach we envisage. We evaluate this approach using a criteria-based framework. The approach is described as if applied to Stansted Airport, but as we have already stated it is feasible to apply it to any airport with market power in any location.

93 Because the regulatory approach relies on inter-terminal competition to constrain prices of those facilities it applies to situations where there is spare capacity (either because of a new investment programme or at existing terminals), although as discussed in Section 3.4, the scale of this spare capacity need not be significant.

Increasing the scope of intra-airport competition

3.2 DESCRIPTION OF REGULATORY APPROACH

94 Our proposed approach to regulating airport capacity is described here and illustrated in Figure 5 below[12]. Regulatory functions of CAA are highlighted in the shaded boxes.

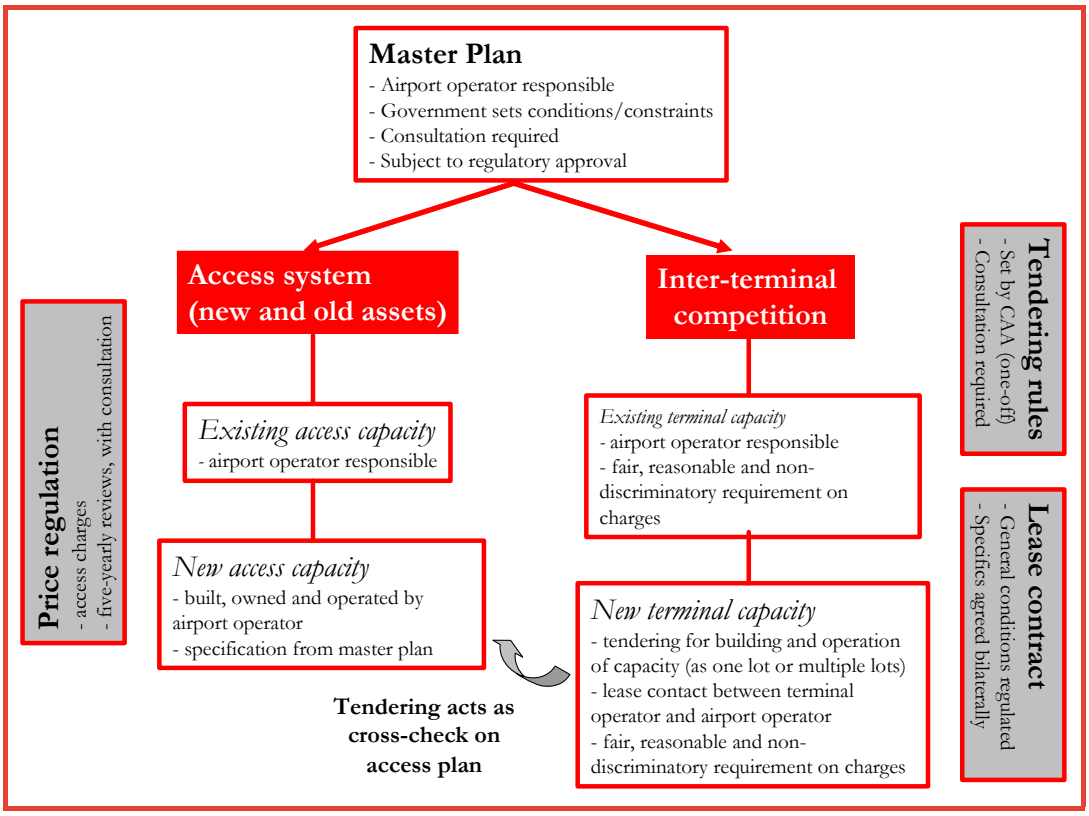

Figure 5: A new approach to regulation

Overview

95 Airport capacity is separated into bottleneck (access) facilities that require a price control to be set, and terminal facilities that are constrained by market forces through a tendering process and inter-terminal competition. The tendering process also links to the access capacity, by providing a market cross-check on the design of the access. BAA continues to own and operate all access facilities, but new parties are involved with the building and operation of new terminal facilities (and potentially existing ones). CAA is responsible for designing and implementing the new regulatory regime in the first instance, but over time its involvement would be largely constrained to the price regulation of access assets

12 Our proposal is similar to 'Option 3: terminal development tendering' discussed by CAA (2008) in its document 'Price control review – consultation on the framework and options for the economic regulation at Stansted Airport', January. There are differences in the detail of the proposals, many of which address concerns raised by CAA in its report.

and repeating tendering processes for terminal capacity (the rules for which would have already been established).

The Master Plan and airport coordination

96 The key feature of the plan is that there would remain at all times a central coordinated view of the development of the airport held in the Master Plan, which would set out the overall scope for airport expansion at all levels.

97 BAA is responsible for the design of the Master Plan, subject to consultation with airlines and other parties. CAA would give regulatory sign-off on the Plan. BAA's behaviour as the authority responsible for the Master Plan would also be subject to standard Competition Law requirements. Clearly the location of new runways is a wider issue of public policy and the Master Plan would have to reflect Government policy regarding where runways can or cannot be developed. In the case of Stansted, approval has been received in principle for the development of a second runway. Thus the Master Plan for further airport development would presumably be constructed around this central fact.

98 The required timing and scale of new capacity requirements are fixed in the Master Plan. Changes to the plan trigger the launch of a new tender for the building and operation of new terminal capacity. The revisions to the plan may come at the request of airlines, having identified demand for new capacity, or from external sources (e.g. a Government review).

99 As now, coordination at the airport is the responsibility of an airport coordinator, working directly with separate terminals. BAA and NATS are also involved with ensuring a match between airspace, approach, airport facilities and terminal facilities where required.

Access facilities

100 CAA sets a price control for the charge that relates to the use of access facilities (e.g. runways/aprons/inter-terminal access facilities/land on which terminals are built). These assets are built, owned and operated by BAA (as now). The price control applies to the access 'system' provided by both new and existing access assets.

New terminal facilities

101 New investment relating to terminal services is put out to tender, allowing the market to determine the cost and specification of the investment. The tender is for the right to build and operate new terminal capacity. The capacity could be tendered in one go or could be tendered in a number of increments (either all at the same time or over time).

102 CAA sets the rules of the tendering process, following a consultation process with all interested parties. These general rules only need to be established once, reducing the costs associated with running tenders in the future. CAA will also need to monitor the tender process.

103 BAA would have final ownership rights on the terminal (and associated land), with operations by the terminal operator governed by a fixed-term lease contract.

This is required to ensure that there is provision for services to continue to be provided if a terminal operator goes bankrupt. At the end of the lease, or if an operator leaves the airport, a new tender would be run. This tender would be run in accordance with the pre-established tender rules, ensuring consistency over time. It may be the case that the incumbent terminal operator, or BAA, would be able to bid in future tenders, depending on the rules that have been established for participation in the tender. BAA would only have operational responsibilities for an interim period between lease contracts (unless it was in a position to bid in, and win, a tender in the future).

104 CAA sets general rules on what is to be included in the lease contract. Otherwise the specifics of the contract are agreed between the parties, reflecting the exact requirements of the investment under consideration.

105 The new terminal operator sets a charge for use of the terminal. If the terminal operator has other activities at an airport (e.g. is an airline), this is a transfer price. The terminal operator is free to offer a range of price-quality combinations to airlines, depending on market demands. Inter-terminal competition, as well as the tendering process itself, will constrain the charges that could be set. All charges need to be fair, reasonable and non-discriminatory (i.e. consistent with competition law).

Existing terminal facilities

106 The framework for regulation proposed here, assumes that existing terminal capacity are owned and operated by BAA. Charges for the use of this terminal will be constrained by inter-terminal competition and, therefore, formal price regulation is not required. Again, charges need to be fair, reasonable and non-discriminatory.

107 It is feasible that there could be a requirement for the operation of some or all of existing terminal capacity to also be put out to tender, although it is expected that this step may only be considered once the general framework has been developed and potentially tested for the new terminal capacity at Stansted.

Cross-checks

108 If no party is interested in participating in the tender, BAA will need to review plans for access capacity. The lack of interest in the tender for terminal services would reflect market concerns about the level of access capacity or the proposed design of the plans. The Master Plan can be reviewed, and either a tender could be run for the same plan at a later date or a tender could be run for an alternative plan.

109 A process for appeal (e.g. to the CAA in the first instance and to the Competition Commission thereafter) will be established to deal with any complaints about the tender process and/or the award of the tender.

3.3 EVALUATION

110 In this section we identify a set of criteria that a regulatory regime would be expected to meet. We use the criteria to evaluate our proposed framework for regulating capacity investment at Stansted, comparing it CAA's existing approach.

3.3.1 Criteria

111 We think that any regime for regulating new capacity investment at Stansted should be designed to meet the following criteria.

- *Investment:* BAA and other terminal operators at the airport should be provided with investment incentives that are consistent with market requirements (over time). This will result in the efficient determination of the required scale, design and timing of investment and thereby deliver maximum benefit to passengers.
- *Monopoly rent:* any monopoly rent at the airport should be minimised, mimicking the impact of effective competition in a market.
- *Airport charges:* a transparent and smooth price profile should be delivered over time.
- *Risk-sharing:* risks should be allocated in a transparent way to the parties (BAA, other operators, airlines, passengers) that are best able to bear the risk and the return earned should be commensurate with the level of risk borne.
- *Behaviour of airport operator:* BAA should not gain any advantage from its incumbent position, and the behaviour of the operator should be monitored (in a tender process and in the provision of capacity).
- *Competition in the airline market:* regulation should not distort the effectiveness of competition in the airline market.
- *Operational feasibility:* the approach to regulation should be feasible to implement from an operational perspective. In particular, where coordination is required across functions (e.g. linking aircraft access to a terminal to location of passengers within the terminal), it should be easily delivered.
- *Cost of regulation*: regulatory costs (over time) should be minimised, relative to the expected benefits delivered.
- *Simplicity:* the approach to regulation should be transparent and easy to understand, for all parties involved in the airport.

112 These criteria are consistent with the statutory duties and objectives of CAA.

3.3.2 Evaluation

113 In Table 1 we compare the existing regulatory structure with our proposed approach to regulating new capacity investment at Stansted, under each of the criteria discussed above.

114 We think, from this analysis, that our proposal delivers more benefit than CAA's existing approach. In particular, the proposed approach:

- delivers, through the use of a tendering process, efficient incentive for new capacity investment (runway and terminals), consistent with market requirements;
- ensures efficient provision of terminal services at existing and new terminals, with BAA and other terminal operators constrained by inter-terminal competition
- has low regulatory costs over time, with market forces constraining the terminal operator and the provider of access facilities where possible; and
- improves the determination of price controls, by reducing the scope of the control and providing an opportunity to revise the methodology for calculating the control.

115 We would therefore encourage the CAA, and the Competition Commission, to use the opportunity of the current reviews of the airport sector (and Stansted airport in particular) to move to this approach to regulating new capacity investment..

116 We note, as an aside, that it would be feasible to introduce inter-terminal competition by allowing BAA to agree, through bilateral negotiation, a lease contract with another company for the provision of services at a new terminal or at an existing terminal. The use of a tendering process is preferable to bilateral negotiations. The main advantage is that tendering is a transparent and open process, allowing all interested parties to participate. This ensures a more efficient outcome, even if only one company ends up bidding.

Criteria	Existing approach	New approach
Investment	Design and timing of access and terminal capacity is BAA's responsibility, subject to requirements set by Government or CAA. Concerns that BAA has incentive to under invest, as discussed in Frontier's 2007 report on Stansted Airport. This can result in timing or design of the proposed capacity not reflecting market demands. BAA and airlines have not succeeded in reaching an independent agreement on the appropriate design and timing of investments. This is because of the varying interests that exist, reflecting the heterogeneity of the services required at terminals.	*Impact of tendering* Investment in access and terminal capacity determined by market requirements. Timing, scale and quality-specification of terminals will reflect demand. This may result in one large terminal being built to a standardised design, or it may result in multiple terminal spaces being built, with different specification mixes. The outcome will depend on what the market demands, and hence maximum value will be provided to passengers. BAA, as provider of access infrastructure, will also have an incentive to meet market demands, as the tender for terminal capacity acts as a 'market test' on the design of access capacity. The rule used to choose the winning bid from a tender, and the party responsible for making that choice, would need to be appropriately determined to ensure that no bias is introduced towards one type of investment over another. These issues are discussed in Section 4. *Impact of inter-terminal competition* On-going pressure on all terminal operators, and BAA as operator of access facilities, to ensure that investment is undertaken at a time, and to a specification, that is consistent with market demand. If a provider of terminal services fails to 'listen' to the market, airlines will have the

Criteria	Existing approach	New approach
		opportunity to switch to an alternative supplier. *Impact of price control* Price control for access can be designed to ensure that BAA, and potential terminal operators, have incentive to deliver capacity investment efficiently. All UK regulators design price controls to provide similar capital investment incentives.
Monopoly rent	Regulated airport charges – impact on monopoly rent depends on effectiveness of price cap.	*Impact of tendering* Introduces competitive constraint on charges for access to terminal facilities. Effectiveness of constraint will depend on how tender is run. *Impact of inter-terminal competition* Ensures that the constraint created by the tendering process is reinforced over time by market forces – the existence of effective competition means that any potential monopoly rent in the provision of terminal facilities will be eroded away. Competition law can be used to ensure charges are fair, reasonable and non-discriminatory. *Impact of price control* As now, remaining monopoly rent that sits with

Criteria	Existing approach	New approach
		BAA in the provision of access facilities will be controlled by a regulated price control. Arguably, design of control is easier as it relates to a limited group of assets and may result in a more effective price control than applies to the whole airport now.
Profile of airport charges	Current approach to including investment in RAB results in saw-tooth profile, reflecting lumpiness and lengthy timescale of major capacity investments.	*Impact of inter-terminal competition* Market determined terminal charges, reflecting price-quality combinations and profile that is consistent with demand. *Impact of price control* Possible to design the price control for access charges so that prices follow a smooth profile (see Section 4.5).
Risk sharing	Concern that BAA earns high return when demand is high and construction is underway (risk is low) and that BAA is protected from downside risk by receiving income upfront for investments.	*Impact of tendering* Risk on BAA as access provider less than current risk on BAA as overall airport operator. Terminal operators can provide some guarantee on return earned for the given capacity (either for all of the capacity or a proportion). Again, this depends on the precise way in which tender rules, and the resulting lease contract, are determined (see Section 4). *Impact of inter-terminal competition* The risks that terminal operators face can be

Criteria	Existing approach	New approach
		managed as the operator can choose to exit the market (subject to contract conditions). This provides some protection against risks. BAA is offered some protection against risks in a growing market, as exit by one operator would be expected to result in entry by another to use up capacity. Terminal operators and BAA would be expected to manage risks through financing arrangements, as now. *Impact of price control* BAA and other terminal operators bear risks associated with demand uncertainty. Control on access charges can be set so that risks are managed (through revisions to control at regular periods) and return over time reflects risk borne.
Behaviour of BAA and terminal operator	BAA's interactions with airlines (its customers) are regulated by CAA, and are subject to general competition law requirements.	*Impact of tendering* There will be a market test on the appropriateness of the access capacity through the tender. There is therefore limited ability here for distortionary behaviour by access provider. The relationship between BAA and the terminal operator would be managed through a lease contract. General rules on the contract design would need to be set to ensure that behaviour of both parties is constrained (see discussion in Section 4.4).

Criteria	Existing approach	New approach
		A well-designed tender process will provide a constraint on any incentive to reach an agreement that is profitable for the operators but does not deliver maximum value to passengers. Indeed, this is why the transparency of tendering is considered preferable to bilateral negotiations between BAA and a terminal operator. There may be concern about the incumbent's behaviour in a tender process, particularly if it runs the tender or participates in the tender. The precise rules of the tender process would need to be designed to minimise these risks (see Section 4). *Impact of inter-terminal competition* Other terminal operators, and the ability of airlines to choose from a range of service offerings, constrain BAA's behaviour in the provision of terminal services. *Impact of price control* The provision of access will continue to be regulated by CAA.
Competition in airline market	Airlines are not involved in provision of airport services – hence no direct concern.	*Impact of tendering* Airlines could be the providers of terminal services. There is a risk of barriers to entry being created. This will depend on the way in which terminal capacity is tendered (number of

Criteria	Existing approach	New approach
		lots, number of bidders, openness of tender, etc) and on the terms of the lease contract (e.g. whether there is a requirement to sub-lease some of the capacity). Provisions, in the tender rules and the lease contract, to deal with the potential impact on competition in the airline market, are discussed in Section 4. *Impact of intra-terminal competition* If there are a number of airlines providing terminal facilities, they will compete with each other in the 'terminal market' as well as in the 'airline market'. The more effective inter-terminal competition is, and the stronger the risk of airlines switching across terminals, the less likely it is that a terminal operator will be able to foreclose the airline market.
Operational feasibility	Access and terminal facilities are provided by BAA (although some activities are sub-contracted out). A number of parties are involved with coordination of airspace, approach and airport facilities (on a terminal-by-terminal basis). These include an airport coordinator, NATS, BAA and in some cases airlines that take direct responsibility for facilities such as ground-handling.	*Impact of inter-terminal competition* Terminal services and access services are provided by more than one party. Otherwise situation is expected to be similar to current operations at the airport, with the same parties taking responsibility for any necessary coordination. The fact that similar approaches are applied successfully at other airports (see Section 3.5) means that the approach is operationally feasible.

Criteria	Existing approach	New approach
Cost of regulation	CAA has difficulty in assessing investment proposals. Any attempt to get the 'market' to agree the detailed requirements of investments has not worked. Regulatory costs associated with attempting to determine requirements are high (lengthy consultations and expert advisers). Detailed and lengthy price reviews every five years. Monitoring required to ensure consistency with competition law (OFT/Competition Commission).	*Impact of tendering* Upfront costs to establish rules for tendering process and lease contracts. Once established, costs of running tenders on a repeated basis expected to be low. Monitoring to ensure consistency with rules on tendering required. *Impact of inter-terminal competition* Market 'regulates' provision of terminal facilities and competition law 'regulates' charges to ensure they are fair, reasonable and non-discriminatory. Reduces scope of CAA's role. *Impact of price control* Scope of control is smaller than now (access only) and there is a market test, through tenders, on access capacity proposals - simplifying the job for CAA.
Simplicity	Approach is familiar as used across wide number of sectors. However, the approach is not always transparent, for example in the treatment of capital investment, benchmarking of operating expenditure or the management of service quality, and the process used to assess airport processes can be lengthy and complicated.	*Impact of tendering* Designing and implementing the tender may take time initially. The overarching approach is relatively simple (as illustrated Figure 5) and the design of tender rules and the lease contract can be done in a way that is transparent and easy to follow. Indeed such simplicity and transparency is

Criteria	Existing approach	New approach
		needed for the tendering itself, to ensure bidders understand the value of what is being tendered. *Impact of inter-terminal competition* Market determines charges and service requirements – simple framework that works in a wide range of sectors. *Impact of price control* Opportunity to redesign price control methodology when applied to access charges only – smaller scale of control should make calculations and methodology more transparent and easy to follow.

Table 1: Evaluation of proposed approach to regulation

Increasing the scope of intra-airport competition

3.3.3 Other factors affecting the evaluation

117 As indicated in Table 1, in a number of cases the benefit of the proposed approach to regulating capacity investment depends on the precise way in which the tender process is designed and run, the details of the lease contract that is in place for the terminal operator, and the rules used to regulate charges. We discuss these details in Section 4.

118 The scale of the benefits delivered will also depend on the overall structure of the airport and the ownership of existing and new infrastructure. We briefly consider each of these issues here.

- *Structure of the airport:* the effectiveness of inter-terminal competition will increase with the number of terminal operators at the airport – these could each be operating their own terminal; or there could be a number of operators within a terminal (for example with responsibility for gates). The number of operators could be increased if capacity was tendered in lots (modules), either over time or simultaneously. The potential for further entry into the market for providing terminal facilities will also increase the effectiveness of inter-terminal competition. The threat of entry will be effective as long as there is some unused potential terminal capacity (including unused land that could be built on).
- *Ownership of infrastructure:* inter-terminal competition will be more effective if all terminals have separate owners and if access ownership is separated from terminal ownership. There would also be less concern about foreclosure in airline market, if airlines were required to separate terminal ownership from other airline operations. Some of the benefits of separation may be delivered through accounting separation and/or ring-fencing arrangements. However, we do not think that separation of ownership is a pre-requisite to the introduction of this approach to regulation as the benefits can be delivered with different ownership structures.

119 We do not consider these factors in any detail in this report, but they would warrant further attention as the approach to regulation is developed.

3.4 IMPORTANCE OF SPARE CAPACITY

120 We have focused, in this report, on tendering of new terminal capacity. There is a presumption that the terminal operator will be operating at spare capacity for a period of time after the new terminal has been built. This spare capacity ensures that there is the potential for airlines to switch across terminals and that there is a potential threat of entry (assuming terminal operators have to provide third parties with access to unused capacity). The spare terminal capacity therefore facilitates effective inter-terminal competition at a designated airport.

121 Spare capacity in existing terminals at an airport would also make a proposal for inter-terminal competition viable – new investment in capacity is not needed. As long as there is more than one owner of terminal capacity (existing or new), and there is potential for airlines to switch between terminal operators, inter-terminal competition can be created.

122 This raises an important question: how much spare terminal capacity is necessary to facilitate competition between terminals and so constrain charges to a competitive level? If the answer to this question is that significant excess capacity is needed then the inefficiency in terms of spare capacity maintained would probably more than offset the efficiency gains created by creating the competitive conditions between terminals. But if the spare capacity is low then the cost of unused capacity would be offset by the benefits arising from inter-terminal competition.

123 Furthermore, if the amount of spare capacity required for effective inter-terminal competition is small, it is feasible that inter-terminal competition could be considered at airports that are not undertaking new terminal investment but that operate with spare terminal capacity. A tender process could be run for some (or all) of existing terminal facilities, with the existing spare capacity ensuring that the resulting inter-terminal competition would be effective.

124 The amount of spare capacity that needs to be maintained to facilitate competition can be estimated by performing a "critical loss" calculation on a terminal building.

125 Critical loss analysis is standard in competition economics. In the context of terminal competition, it represents the share of passengers a terminal operator needs to lose so that a sustained 5% increase in charges above the competitive level is unprofitable. The assumption is that airlines will try to switch terminals if they are faced with an increase in terminal charges, unless it is too costly to do so[13].

126 Assuming that switching between terminals is relatively easy for an airline, if one terminal operator increases its charges above the competitive level it can expect to loose a proportion of passengers up to the existing spare capacity in rival terminals. Therefore, for competitive terminal charges to be maintained a minimum level of spare capacity at the airport is needed.

127 We have estimated how much spare capacity would be needed so that a 10 million passengers per annum (mppa) passenger terminal operator would find it unprofitable to increase charges by 5%. We have assumed that the terminal increasing the charges is working at full capacity and competes with other similar rival passenger terminals (i.e. same investment and operational costs). In this setting, the initial competitive level of charges is such that it allows the terminal with more spare capacity to have an adequate rate of return on its investment. For this purpose we have considered a cost of capital equal to 6.2%[14]. Finally, we

13 If the spare capacity in other terminals is not sufficient to accommodate an additional aircraft, then no switching will take place. However, this only happens when all terminals are operating very close to full capacity. This situation does not invalidate the analysis considered in this section.

14 The cost of capital considered by CAA in its latest price review was 6.2% for Heathrow and 6.5% for Gatwick airport.

have used Stansted airport's P&L figures to estimate the revenues and costs of 10 mppa terminal operation[15].

128 We have calculated the required level of spare capacity for different levels of initial investment in the terminal building and for different cost structures associated with terminal operations. The Figure below shows how the level of spare capacity required for inter-terminal competition varies by investment level and by the proportion of costs that are fixed:

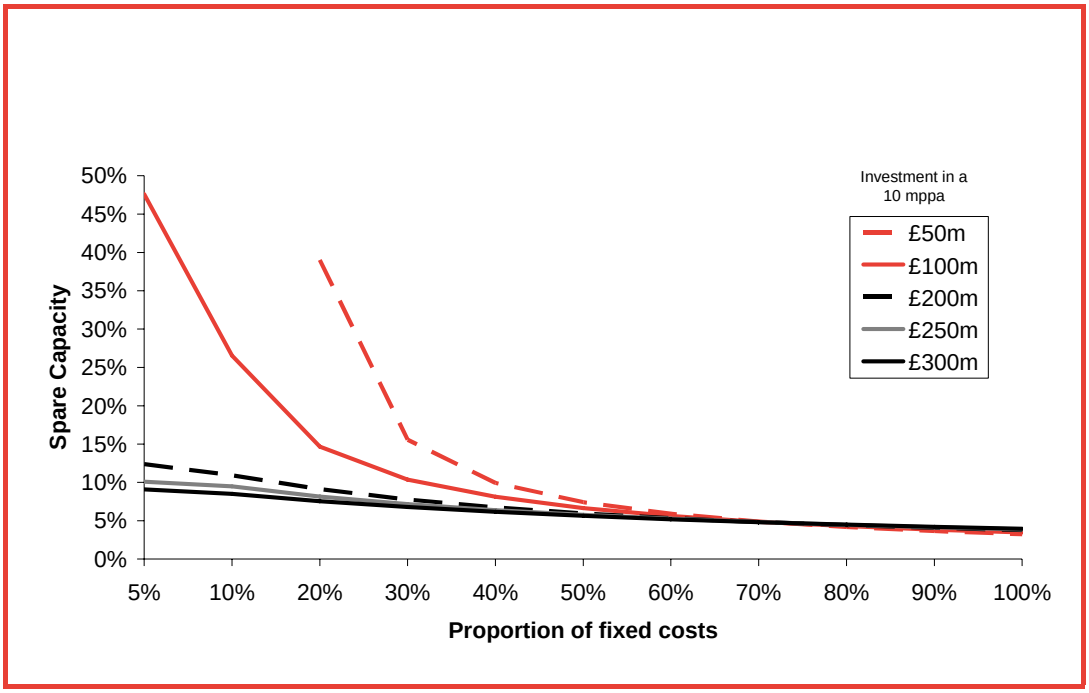

Figure 6: Minimum terminal spare capacity ensuring competitive prices

Source: Frontier analysis

129 We can see that for high levels of fixed costs, a relatively low level of spare capacity at the airport will prevent increases in charges above the competitive level. For high levels of fixed costs, loosing passengers to other terminals implies a substantial decrease in the operating margin for remaining passengers. Low levels of airline switching, and hence low levels of spare capacity at the other terminal, is therefore necessary to prevent the terminal from raising its prices.

15 We have allocated part of the revenues associated to the Stansted airport to current terminal operations and scaled them down to a terminal operation of 10 mppa. In doing so we have considered the revenue structure used by CAA in *Initial price control proposals for Heathrow, Gatwick and Stansted airports - Supporting paper II: Competitive constraints faced by Stansted airport*. We have considered that 68% of airport charges are attributed to terminal operations following the figures presented in *Dublin Airport – Review of Expression of interest for an Independent Terminal*, Panel Report to Minister for Transport, February 2003 (these include security related charges). Based on the observation of cost estimates at several Australian airports we have assumed 70% operational margin for non aeronautical costs and a 20% margin for aeronautical revenues.

130 If terminal fixed costs are low, the level of spare capacity needed to prevent increases in terminal charges will depend on level of operational margin in the terminals. If there is a high initial investment to build the 10mppa terminal, operational margins will have to be higher so that a reasonable return is achieved, i.e. a return no lower that its capital cost. With higher operational margins, loosing passengers to other terminals implies a larger decrease in profits. Therefore, a low level of airline switching, and hence a low level of spare terminal capacity, is necessary to prevent the terminal from raising its prices.

131 According to our estimates, 5% spare terminal capacity at the airport will be enough to ensure competitive prices at terminals with fixed costs of 60% or above. If fixed costs are between 40% and 60% of all terminal costs, 10% spare terminal capacity at the airport would ensure terminal competitive prices.

132 Therefore in most circumstances the level of spare capacity required for inter-terminal competition is relatively small. For terminals with relative low initial investment costs and fixed operational costs, entry barriers are relatively low and would presumably ensure that existing terminals would not increase charges above competitive levels.

3.5 EXPERIENCE IN OTHER AIRPORTS

133 CAA has argued that the proposal to separate activities into those that are operated by BAA (and price regulated) and those that are put out to tender is too complicated from an operational and regulatory perspective.

134 We disagree. There is evidence from a number of airports around the world that the separation of activities is feasible and that the tendering process can be used to improve the delivery of required investments.

135 Specifically, a number of airports (particularly in the US) have successfully separated the provision of access services from the operation of terminals at an airport. At these airports there is a role for third parties, including airlines, in providing terminal services and investing in terminal capacity. Details of these examples are presented in Annexe 1 of this report.

136 In Table 2 we present examples of separated terminal operations in the US and in other countries where:

- terminal operations are separated from the rest of the airport;
- the airport operator provides terminal services in some cases but not in others;
- airlines are responsible for some terminal operations, through long-term lease contracts; and
- terminal operators (including airlines) invest in the terminals.

137 There are other examples of airlines having invested in terminal expansion in EU airports but they have not been responsible for the operation of the terminal. We discuss these examples in Annexe 1.

Region	Airport (No of terminals)	Separated terminals	Terminal operator	Airport operator	Airport operator terminals
US	JFK New York (8)	Terminal 1	TOMI (Air France, Lufthansa, JAL, Korean Airlines)	NY & NJ Port Authority	0
		Terminal 2 & 3	Delta Airlines		
		Terminal 4	IAT (LCOR, Schipol, Lehman Bros)		
		Terminal 5 & 6	JetBlue		
		Terminal 7	British Airways		
		Terminal 8	American Airlines		
	Boston Logan (4)	Terminal A	Delta Airlines	Massachusetts Port Authority	2
		Terminal B	United /US Airlines		
	La Guardia (4)	Delta Terminal	Delta Airlines	NY & NJ Port Authority	2
		US Airways Terminal	US Airways		
	Newark (3)	Terminal C	Continental Airlines	NY & NJ Port Authority	2
	Chicago O'Hare (4)	Terminal 1	United Airlines	City of Chicago Department of Aviation	2
		Terminal 3	American Airlines		
	Northern Kentucky Intl. (3)	Terminal 3	Delta Airlines	Kenton County Airport Board	1
	Charlotte/ Douglas Intl. (1)	Terminal	US Airways	City of Charlotte	0
	Minneapolis/St Paul (2)	Terminal	Northwest Airlines	Metropolitan Airports Commission	1

Region	Airport (No of terminals)	Separated terminals	Terminal operator	Airport operator	Airport operator terminals
Canada	Lester B. Pearson Toronto (3)	Terminal 3 *	TTLP (Terminal Three Limited Partnership)	GTAA (previously GACC)	1
Europe	Prague Intl. (Czech Republic) (2)	Terminal 2 (Tender)	PIADC (Bouygues and Schipol)	Czech Airport Authority	1
	Budapest Ferihegy (Hungary) (2)	Terminal 2* (Tender)	ADC (Aeroport Montreal)	Budapest Airport	1
	Antalya Intl. (Turkey) (2)	International Terminal 2 (Tender)	Celbi (Turkish operator)	Fraport	2

Table 2: Separated terminal operations

Source: CNI, Airport sites, Airport operator sites, other
*Note: * These terminals have re-entered the airport operator control. Lester B. Pearson terminal was acquired by GACC and Budapest Ferihegy was expropriated by the Hungarian government.*

138 We conclude, based on our assessment of the cases discussed in Annexe 1, that:

- it is feasible for different parts of the airport, namely terminals, to be operated by multiple companies (as occurs in the US but also in other countries);
- airlines can be amongst the companies operating these terminals, so long as regulatory mechanisms are in place to address the risk of airline foreclosure;
- regulation (including competition policy) is required to establish constraints on the contractual relations between the airport operator and another company operating the terminal, and to monitor enforcement of these constraints and general behaviour in the airport (e.g. relating to foreclosure of other airlines or discriminatory pricing by the airport operator);
- participation of parties, other than the airport operator, in the provision of terminal services can arise through bilateral negotiations or through a tendering process; and
- there is a market for the building and operation of terminal services, with sufficient parties expressing interest in participating in international tenders[16].

139 Our conclusions are based on the number of cases reviewed for the purposes of this report. This list of cases is not exhaustive and other examples may exist.

16 For example, according to the Panel reporting to the Irish Department of Transport, 'a total of thirteen organisations or consortia submitted expressions of interest' to develop a second terminal at Dublin airport (p37 of Panel 2003 report). This provides a strong indication of a market for the building and operation of terminal facilities.

140 The evidence presented in Annexe 1 supports our view that the approach to regulation that separates access and terminal facilities, allows for tendering of the terminal facilities, and creates inter-terminal competition is feasible and not overly complex, although the application of the approach will vary depending on the details included in tender rules and the lease contract. These are discussed in Section 4.

4 Implementation issues

141 In this section we discuss the process for designing and implementing the proposed approach to regulating capacity investment. The main focus is on the design of the tendering process and associated lease contract, and on the methodology for setting price controls.

142 There are six main stages to the tendering process and the establishment of a regulated price control for access assets.

- Design tender rules and provide details of these to potential bidders.
- Invite parties to participate in the tender.
- Run tender and choose a winner from the set of bids.
- Establish a lease contract between terminal operator and BAA.
- Set a price control for access services.
- Monitor tender process, enforcement of lease contract and price control.

143 We present high level details of what would be involved at each stage here.

144 The details of how the tender process is implemented will vary by airport and/or the type of capacity investment that is under consideration. There is therefore value in developing a flexible framework rather than being prescriptive about a number of detailed issues.

145 As noted earlier, we focus our attention here on the design of a tender for new terminal capacity at Stansted. The detailed design of the tendering process only needs to be undertaken once by CAA and could then be rolled-out to other airports or for future capacity investment at Stansted. Once a clear framework is established it can be easily implemented for future tenders, with minor adjustments made to reflect the specific circumstances of that tender. We therefore expect CAA to invest time and effort upfront in designing the tendering framework and changing the approach to regulation, but over time the level, and hence cost, of regulation will be lower.

146 We discuss the potential advantages and disadvantages of different options for the design of the tendering framework and the price control here. The discussion is kept at a very high level, with the focus on putting forward credible ideas and closing off options that would be inappropriate. If tendering were to be introduced at Stansted a more detailed review of the appropriate design of the tender and lease contract would be needed. It is hoped that our thinking will act as a catalyst for future discussions on the appropriate way forward.

4.1 DESIGNING TENDER RULES

147 The first stage in any tender process is for the tender to be designed and information on the tender to be provided to potential bidders. We discuss the options for specifying the rules for the tender process here.

148 All participants in a tender (the bidders and the party running the tender) will require clarity on what is being tendered and how the tender is to be run. We think it would be appropriate for CAA to take responsibility for establishing a clear framework and rules for the tender process. CAA would be expected to run an open consultation on the rules, consistent with best regulatory practice. The rules for running a tender could be established as regulatory guidance, with a specific plan for monitoring the process and ensuring that the rules are adhered to.

149 There is an issue about whether the model could be implemented under current legislation. We would recommend that a detailed legal analysis is undertaken to identify what changes are needed to allow for terminal facilities to be tendered and for inter-terminal competition to be created at Stansted. These legal changes are not expected to be significant, and would deliver significant benefits over time.

150 CAA would need to outline a clear framework in advance, explaining how the tender process would work and how BAA and other operators at the airport would be regulated going forward. Clarity, and consistency over time, from CAA is particularly important as it will affect the valuation that potential bidders in the tender put on the right to build and operate terminal facilities.

151 The rules relating to the tender process would need to clarify:

- What is being tendered?
- How did CAA decide to run a tender for terminal capacity?
- How will the tender be run (e.g. will bidders need to come together or can tenders be sent by post)?
- What information will interested parties be provided with?
- Will CAA, or another party, run the tender?
- What organisations (e.g. airlines, BAA) will be allowed to bid and what are the pre-qualification conditions?
- What information will need to be provided in a bid?
- How will the winning bid be chosen?
- What constraints will be placed on the lease contract between BAA and the winner of the tender (specific details would be agreed between the airport operator and the winner of the tender)?
- How will the tender process, and future operations at the airport, be monitored by CAA?

152 The first five of these factors are discussed in turn here. The others are considered in the following sections.

153 Once the rules of the tender process have been established, CAA would issue a publicly available tender document that details these rules and explains when the tender is to be run. The tender document would need to be made available to a wide range of interested parties including airlines, other airport operators, debt finance companies, or consortiums incorporating a mix of experiences.

154 Throughout the discussion we emphasise that the decisions that are made for the introducing of a tendering process for terminal facilities at Stansted can be repeated elsewhere in the future. That is, the level of detail required to design the tender process for Stansted will not be necessary for future tenders at Stansted or other airports as the framework will have been established. Some variation from the 'standard' may be required, to reflect the specific circumstances of the capacity being tendered, but would be expected to be small changes to an established approach.

4.1.1 What is being tendered?

155 The general rules for the tender process would specify what is to being 'sold' in the tender. Once a clear definition has been proposed for the new terminal facilities at Stansted, it could be used for a number of other tenders (at Stansted or other airports).

156 The one exception is the decision on how much terminal capacity to include in a single tender. Here, there could be variation from one case to the next on whether to tender all potential terminal capacity together or whether to tender it in smaller lots.

Object being tendered

157 We propose that, at Stansted, the object being tendered is the right to build and operate new terminal capacity at the airport. This relates to all facilities and associated services that are included within the terminal (from when a passenger walks through the door of a terminal to when a plane pushes away from the terminal building). This includes check-in, security, passport control, retail services, gates, piers and other passenger-related services (e.g. business lounges).

158 Any minimum requirements for the new terminal capacity would be included in the Master Plan, set out by BAA. For example, the Master Plan would establish where the terminal would be located and each bid would provide details of the proposed specification for the terminal (e.g. design to ensure feasible for third-party access or re-use in the future by a different terminal operator). Bidders would need to ensure that the specification was consistent with existing health & safety, security, and other legal, standards for an airport terminal.

159 The tender winner would have the right to operate the terminal for a fixed period (e.g. 25 years) under a lease contract. BAA would retain final ownership of the terminal (and associated land). This is required to ensure that there is a 'supplier of last resort' of the terminal services if the terminal operator goes bankrupt. However, BAA would be required to re-tender the operation of the terminal at

the end of the lease (or an earlier date if necessary), to retain the pressures of inter-terminal competition. The tender would be simple to design and run, as the tender rules would already have been established. This ensures consistency of the approach to tendering over time.

Single or multiple lots

160 The tender could be for the right to provide all of the proposed additional terminal capacity needed at Stansted, as determined by the Master Plan. Alternatively, the tender could be for the right to provide a proportion of this capacity only. This would require the capacity to be sold in modules ('lots'). We think there may be benefit in considering this option, as it increases the number of potential operators at the airport and therefore increases the effectiveness of inter-terminal competition. It would also ensure that capacity was being built when it was needed rather than being all built up-front. Furthermore, potential bidders may be more interested in participating in the tender if the project that is being bid for is a reasonable scale.

161 If capacity is to be sold in 'lots', the tender rules would need to establish how the lots were to be defined (e.g. the size of capacity) and would need to specify whether the lots were to be sold simultaneously or over time (sequential). If lots can be combined after the tender, then smaller lots are feasible as bidders can bid for the number of lots that provide their required capacity. If bidders can only bid for one lot, the size of the capacity in a lot will need to be sufficiently large for a third party to provide a profitable offering to an airline. This allows new entrants to the airport to bid for the capacity given the expectation of a viable business proposition.

162 CAA may also wish to emphasise that unused land that is suitable for terminal construction provides the opportunity for future tenders to be run. This raises the possibility of future entry in the provision of terminal facilities, which will affect bidders' valuations and will improve the effectiveness of inter-terminal competition.

4.1.2 What triggers a tender?

163 Potential bidders will need to understand how the need for a tender for terminal capacity is triggered. We anticipate two situations arising.

- The Government could indicate that it supports a proposal from BAA for expansion at the airport, and associated revisions to the Master Plan. This would include the need for extra terminal capacity to be provided.
- A third party, which may be an airline or an outside investor, could approach BAA to suggest that there is market demand for new terminal capacity. A tender process would then be triggered to allow other interested parties to bid for the right to provide this capacity, and to provide a signal that the assumption on demand for additional terminal capacity is accurate. We think this would be preferable to a bilateral agreement between BAA and the airline that allowed the airline to build and operate the terminal capacity without any constraint from market forces.

164 The tender process that follows would be the same in both cases.

4.1.3 How will the tender be run?

165 The tender rules would establish clear guidance on what type of tender to run in different situations. The appropriate form of tender may vary by airport and over time. It would therefore be preferable to allow for flexibility in the choice of tender instrument.

166 As has occurred in other sectors (e.g. design of auction for mobile phone licences) we expect that CAA would obtain expert advice on the appropriate tender framework to use for terminal tendering, and would then determine the instances in which changes to this standard framework would be appropriate. We provide a high level overview of different options here.

Open or closed

167 The tender could be either 'open', where all participants see who is participating and what is being bid, or 'closed' where bids and bidders are secret. A closed tender would be preferable in this context, as it allows for a number of different dimensions (e.g. quality and price) to be taken into consideration. The closed tender, whereby bids are provided in an envelope, can be combined with a 'beauty parade', where bidders discuss their proposals with the organisation choosing the winning bid. This allows for the bids to be evaluated in detail, but introduces a degree of subjectivity into the decision on who wins the bid.

168 High level advantages and disadvantages of each option are shown in Table 3.

	Advantages	Disadvantages	Comment
Open	Transparent Bidders can learn from each other and potentially improve accuracy of their valuations	Difficult to manage multi-dimensional bids (e.g. price-quality mix) Risk of collusion Potential for bidders to bid in a way that distorts other bidders' valuations	IT now allows bidders to be at remote locations in open tenders.
Closed	Lower risk of collusion. Bidders do not need to be brought together. Allows for a number of different dimensions to a bid to be considered. More likely to attract bidders that are small or are concerned about publicly revealing their valuation.	Decision rule on choosing winner may be difficult to monitor given lack of transparency of bids	Common format for public procurement tenders

Table 3: Open or closed tender?

Sequential or simultaneous

169 When more than one lot of capacity is being tendered, they can be tendered all at the same time (simultaneous) or in sequence. The sequential tender could be over a short period of time or over a long period of time.

170 A combination of the two options would be appropriate for the terminal tendering model. For example, a proportion of planned new terminal capacity (as per the Master Plan) could be tendered today, reflecting expected growth in demand in the short-term. This tender would include a number of lots, increasing the number of potential bidders and potentially the number of terminal operators. If demand changes, or the capacity gets close to being used up, another tender could be run for another 'module' of capacity. This keeps access to terminal capacity open over time, and avoids situations where large terminal facilities are constructed up front but are then not used for a long time.

171 High level advantages and disadvantages of each option are discussed in Table 4.

Implementation issues

	Advantages	Disadvantages	Comment
Simultaneous	Certainty over total capacity that will be provided	Complicated to determine appropriate bundling of 'lots' after tender Uncertainty over allocation of 'lots' may deter bidders Large amount of unused capacity in short-term	Would need to have clear and simple rules about how 'lots' could be combined (if at all)
Sequential	Information on value of capacity revealed through tender process – bidders able to improve valuations over time Amount of spare capacity in short-term can be kept to small levels (that are sufficient to ensure inter-terminal competition)	Risk of collusion if tender is open Difficult for bidder to put value on capacity if the total amount of lots required can only be purchased over time	Lots in each tender will need to be sufficiently larger to ensure that bidders could create a profitable operation from the amount of capacity being tendered

Table 4: Simultaneous or sequential tender?

One-stage or two-stage

172 The tender could be run in one-stage or two-stages (or more). This is in addition to a pre-qualification round where potential bidders would provide an Expression of Interest and demonstrate that they meet minimum pre-qualification requirements.

173 In a one-stage tender all parties would submit their bids and the winner would be chosen. With a two-stage tender, preferred bidders from the first round are short listed and requested to provide a second bid. The purpose of the two stage bid may be to obtain more information from preferred bidders – e.g. do first round on price and second on quality. When there is to be more than one winner of the tender, the second round could be used to obtain revised bids that reflect the mix of companies that will be awarded the tender (as chosen in the first stage).

174 We would expect there to be advantages in running a two-stage approach, allowing for the different dimensions of terminal investment to be captured while

retaining a reasonable simple format at each stage. The two-stage approach also allows for situations where more than one operator 'wins' the tender but ensures that there is a coordinated approach to building the terminal capacity overall. This increases inter-terminal competition without jeopardising the operational feasibility of the model.

4.1.4 What information is provided to bidders?

175 Potential bidders will need to be able to form a view on the expected value of the terminal capacity to them. This valuation will depend on the expected stream of revenues, determined by demand and the price for use of terminal services, and the expected stream of costs. Demand for terminal services from airlines will in turn depend on the cost of access at the airport and the scale and design of the terminal.

176 CAA will need to establish a detailed list of what needs to be included in an information pack for any tender. Again, once this list has been established it can be easily replicated for future tenders.

177 We have developed an initial list of the information that will need to be provided to potential bidders. This should be reviewed when an actual tender is being run:

- the Master Plan for the airport, particularly details relating to the design and timing of access capacity (runways, taxiways, surface access, etc) and the total expected amount of terminal capacity at the airport;
- the total amount of terminal capacity being tendered;
- if capacity is being tendered in lots, the proportion of total capacity that is being included in the current tender and details of any capacity that is held in reserve[17];
- if capacity is being tendered in lots, whether bidders can bid for all lots or whether only a limited number of lots can be bid for;
- any minimum requirements or constraints on the specification of the terminal (e.g. that provisions must be included for piers, even if they will not be used in the short-term; consistent security specifications across terminals);
- expected cap on access charges and any other regulatory constraints on the access price and terminal charges;
- the process that will be used to choose a winner from the tender (see below);
- any constraints that would be placed on the contract between the terminal operator and BAA; and

17 This 'unused capacity' acts as a constraint on bidders (and ultimately the terminal operator) as it raises the potential for future entry in the market, and hence the threat of more effective inter-terminal competition.

- pre-qualification requirements (e.g. credit requirements; legal rights and responsibilities; etc).

178 CAA would be expected to provide this information to all potential bidders, ensuring transparency of the process. The information would need to be provided a sufficient period in advance to allow potential bidders to make an informed assessment of the potential value of the awarded contract to them.

4.1.5 Who runs the tender?

179 CAA will need to establish, in the tender rules, the party that would be responsible for running the tender and therefore choosing the winning bid. There should be consistency here, from one tender to the next, to allow the party running the tender to develop expertise in the area.

180 The tender would be run by a single party. Assuming the rules of the tender process are clearly defined it would be possible for CAA, BAA, the Department for Transport (DfT), or a third party to take on this role. Our views on the advantages and disadvantages of each option are presented in the table below.

	Advantages	Disadvantages	Comment
CAA	Independent position on ultimate winner. Statutory duties expected to be consistent with tender rule requirements for choosing a winner.	Limited ability to reviews bids (similar to current concerns with reviewing airport's investment plans). No experience running tenders. Ongoing costs of running the tender process, in addition to cost of setting up tender rules.	External advisers could be used to assist with review of bids (and design of tender process).
BAA	Well placed to review and assess bids. May have experience running tenders (e.g. for sub-contracting of existing activities). Ongoing costs of running tender rest BAA – only upfront costs for CAA in design of tender rules.	Choosing competitor – expected to distort choice of winner. Choosing provider of revenue stream for access – expected to distort winner choice (e.g. choose company that provides guarantee payment early).	Rules on winner would need to be transparent and simple (subject to scrutiny). Bias likely to remain.
DfT	Experience running tenders (e.g. rail franchises). Focus on public interest. Airport knowledge. Lower costs for CAA, allowing them to focus on price regulation.	Limited ability to review bids – would require external expert advice. Coordination with CAA required.	Review of rail franchise experience may help to understand appropriate balance between role of DfT and sectoral regulator.
Third party	Independent – no bias in choice of winner. Party that is able to assess tenders could be chosen (e.g. consortium of engineers and financial experts). Could be a party with experience running tenders.	Potentially limited knowledge of airport operations.	Not clear how this party would be identified. Could work with CAA in running tender and review of bids (combining advantages of both options).

Table 5: Who runs the tender?

Implementation issues

181 On balance, we think that the tender should be run by the CAA or the Department of Transport . This reflects the concerns about BAA running the tender and the expectation that a third party would provide no clear advantage relative to the regulator. Expert advisers would be expected to be involved in the design and running of the tender. The role of BAA could be reconsidered, however, if it has no activities in terminal capacity and only has responsibility for providing access facilities.

4.2 PARTICIPATION IN THE TENDER

182 After the rules of the tender process have been established, the CAA would need to issue an invitation to potential bidders to participate in the tender. This requires CAA to set, in advance, a set of clear rules on which parties can participate in the tender. These general rules can be established for the first tender and repeated for future tenders.

4.2.1 Who can bid?

183 The more bidders there are the more efficient the tender process. In principle, therefore, it would be preferable to allow any party that meets the pre-qualification conditions to participate in the bidding process. This could include BAA, airlines (those that already operate at the airport and new entrants to the airport), other airport operators, debt finance companies, other infrastructure companies or a combination of these.

184 We consider here the case for allowing airlines, BAA and/or a different incumbent terminal operator to bid in the tender. The latter situation only arises if more than one tender is run over time, with new terminal operators being created after the first and subsequent tenders. The advantages and disadvantages of each option are described in Table 6.

	Advantages	Disadvantages	Comment
Airline	Understand passenger requirements. Large pool of potential bidders. Operational understanding of requirements for building and operating a terminal.	Risk of foreclosure – prevent other airlines from having access to terminal capacity. Most relevant if reach a point where terminal capacity is constrained. Risk of discriminatory pricing, even if provide access to other airlines. Airlines that are already operating at the airport may have an advantage over new entrants (e.g. hold the slots at the airport).	Risk can be dealt with by creating a number of terminal operators (effective inter-terminal competition), ensuring there is sufficient spare capacity at the airport, and including a clause in lease that set a rule on providing access to capacity (e.g. use it or lose it). Expect competition law to ensure that charges are fair, reasonable and non-discriminatory. Concerns would be alleviated to some extent if there was separation between airline 'flight operations' and airline 'terminal operations', to ensure transparency of internal transfer prices.
BAA	Operational understanding of requirements for building and operating a terminal. Able to coordinate with access facilities.	No inter-terminal competition. Potential preferential treatment in provision of access facilities (e.g. charges or service quality). Obvious concern of preferential treatment if BAA runs the tender.	Behaviour of BAA, and terminal charges, will be constrained to some extent by tendering process itself, even if found to be 'winner'. Concerns would be alleviated to some extent if terminal operator separated from access provider. Concerns would also be lessened if BAA's market power in provision of terminal facilities is significantly reduced (inter-terminal competition).
Terminal operator	Operational understanding of requirements for building and operating a terminal. Familiar with tendering process.	Reduces number of terminal operators and hence effectiveness of inter-terminal competition.	Consistency between treatment of BAA (as one terminal operator) and other terminal operators would be appropriate, although risks are higher with BAA as it is also responsible for access facilities.

Table 6: Who can bid?

Implementation issues

185 Based on our assessment of the advantages and disadvantages in Table 6 we think that:

- airlines should be allowed to participate, if provisions are in place to minimise the risk of foreclosure of other airlines;
- BAA should be prevented from participating if it takes a lead role in the running of the tender;
- BAA and other terminal operators should be allowed to participate if they do not have significant market power at the airport, perhaps by introducing a rule on participants having to have a market share of terminal facilities below a certain threshold; and
- terminal operators should be treated consistently with BAA in future tender rounds (the concerns about incentives for an existing terminal operator are similar for both).

4.2.2 What is included in bid?

186 The rules of the tender process would need to specify what information is to be provided in a bid. Again, the rules could be determined upfront and applied to a number of tenders over time.

187 Bidders would need to provide a detailed business plan for the terminal capacity investment. The plan would need to demonstrate that the bidder met all of the pre-qualification criteria. For example, potential bidders might have to demonstrate that they had the financing required to build the terminal. The proposed terminal plan would also need to identify a proposed approach for working with the airport coordinator, NATS and BAA to ensure that (as now) there is coordination between airspace, approach, general airport facilities and terminal facilities.

188 The information that would be required includes:

- size and design of proposed terminal capacity;
- timescale for investment programme;
- expected demand over time (i.e. over what time will capacity be used);
- maximum charge for third-party access to terminal facilities; and
- expected time over which investment will be recovered.

189 The relevance of these pieces of information will vary depending on what rule is used to choose the winning bid (see Section 4.3).

4.3 IDENTIFYING THE PREFERRED TENDER

190 CAA will need to establish, upfront, how the winning bid is to be chosen. The rule would need to be transparent and simple, to allow potential bidders to evaluate their bid taking account of the expected probability of winning. These

rules for identifying the winning bid could be devised once and then re-used for future tenders.

191 Three situations can arise from a tender process, and different rules for choosing a winner apply in each case:

- nobody bids in the tender;
- only one party bids in the tender; or
- multiple parties bid in the tender.

192 We consider each of these situations here.

4.3.1 No bidders

193 If there is no bidder, there is a clear signal that the design of the access capacity, and the proposal for terminals in the Master Plan, are not consistent with market demand. In this situation, neither the access capacity (new runway) nor the terminal capacity would be built. It is in this way that the tender process provides a market-check on access capacity proposals.

4.3.2 Single bidder

194 If there is only one bidder in the tender the bidder would win, assuming it meets the pre-qualification requirements. CAA may wish to ensure that the tender process was sufficiently open and transparent and consider why other potential bidders did not participate. The tender may be re-run if there is concern that potential bidders were prevented from bidding in some way.

4.3.3 Multiple bidders

195 If there are a number of bidders (the preferred situation), a rule needs to be established for determining how the tender to build and operate terminal capacity will be allocated. Two situations can be considered here:

- there is only winner; or
- the tender is for multiple lots of terminal capacity and, hence, it is feasible for there to be more than one winner.

196 We discuss each case here.

One winner

197 When there is only one winner of the tender, CAA will need to define a clear and transparent rule for choosing that winner. A number of options can be considered.

- *Beauty contest:* rather than running an 'auction', the tender could be run as a beauty contest. This allows the party running the tender to review the bids using a number of different criteria and allows, in particular, the combination of design-cost-price to be considered simultaneously. Qualitative and quantitative criteria are used to form a judgement on the preferred bidder.

- *Highest price*: the winner would be the bidder with the highest price bid. This would require a payment to be made from the terminal operator to BAA (or a third party potentially) for the right to build and operate the terminal.
- *Lowest price*: the winner would be the bidder that bids the lowest price, where the price here is a charge for third-party access to the terminal capacity. This charge would be expected to be a cap on actual charges negotiated between the terminal operator and the users of the terminal once it becomes operational.
- *Least cost*: the winner would be the bidder that proposes to build and operate the terminal at the lowest cost, while ensuring that capacity (access and terminal) are used.
- *Maximum value*: the winner would be the bidder that offers the maximum value to the airport. This would be the bidder that ensures the highest proportion of capacity is used as quickly as possible. The consistency between design of the terminal capacity and demand would be internalised here. The bidder would be expected to make a financial guarantee relating to expected demand (i.e. usage of capacity), to ensure that there is a penalty for bidding in a way that is inconsistent with expectations. For example, the winning bidder could be required to pay the access provider a proportion of revenue not earned because the actual level of demand was lower than predicted in the bid.
- *Shortest lease contract*: bidders could be asked to indicate how long it would take them to recover the cost of their investment. After that time period the lease to operate the terminal would be re-tendered (with the incumbent being allowed to bid in that tender). The bidder with the shortest timeframe for recovering the investment would win. This is because that bidder would be expected to have the most appropriate price-quality-capacity level offering relative to market demand.

198 We review the advantages and disadvantages of these options in Table 7.

Implementation issues

	Advantages	Disadvantages	Comment
Beauty contest	Allows for multi-dimensional nature of bid to be taken into account.	Closed process.	
Highest price	Simple and transparent rule.	Payment to BAA required. Expected to distort investment incentives and, potentially design of Master Plan. Increased concern if BAA is responsible for running the tender.	
Lowest price	Simple and transparent rule. Increased potential for third-party access agreements to be reached given existence of transparent cap on terminal charges.	If bidder is an airline, charge will be a transfer price; may be difficult to identify and monitor compliance with 'cap'.	Terminal charges would still be subject to fair, reasonable and non-discriminatory requirement. Companies may internalise extra costs associated with building high spec terminals if these are expected to be sufficiently profitable. Expect a mix of quality to emerge if this is consistent with market demand.
Least cost	Low cost investment. Simple rule. Risk on terminal operator if costs higher than proposed.	Potential bias towards design of terminals that may not be reusable by other operators in the future.	
Maximum value	Simple and transparent rule. Expected to meet market requirements (by internalising profit-quality trade-off).	Increased risk from demand uncertainty on terminal operator – may deter potential bidders.	
Length of	Simple and transparent rule.	Risk of not renewing lease in second-round	Conditions can be set in lease contract to limit risk

Implementation issues

	Advantages	Disadvantages	Comment
lease	Expected to meet market requirements (by internalising profit-quality trade-off).	tender may deter some potential bidders. Alternatively, there may be limited interest in second-round tender if terminal specification is tailored to meet the needs of a particular airline in first place (thereby foreclosing future entry).	of foreclosing other company from taking over in future.

Table 7: Options for identifying a single tender winner

Implementation issues

199 Based on our review of the advantages and disadvantages in Table 8 we think that the preferred rule would be based on the lowest price for third party access, the maximum value or length of lease or a combination of the three. These three rules are preferable as they are simple and transparent and are no expected to distort BAA's incentives or bidder behaviour.

Multiple winners

200 An alternative (or additional) rule would need to be established if more than one bidder can win the right to build and operate terminal capacity after the tender. This would arise when terminal capacity is tendered in lots, and bidders bid for one or more lots. All potential bidders will need to understand, upfront, that this is the expected outcome from the tender. Two situations could arise here.

- *All bidders win*: in this situation, all bidders could be allowed to operate the proportion of terminal capacity (i.e. lot) that they bid for, in accordance with the terms of their bid. The rule could only be used if the amount of terminal capacity bid for is equal to the total amount of terminal capacity made available in the tender.
- *A limited number of bidders win*: if there are more bidders than lots (or more capacity is bid for than the total amount of terminal capacity included in the tender), then a rule will be needed to choose one set of bidders over others. This rule would be chosen from the list established for the case where there is a single winner of the tender. For example, if lowest third party access price is used, the capacity would be allocated to the first five bidders that have the lowest proposed charges and they would provide the required total amount of terminal capacity together.

201 In both these cases, the tender would be expected to be conducted in two stages. In the first stage the bidders would bid for an amount of terminal capacity (one or more lots), an associated charge for terminal use or value provided to airport, and details of the specification of the terminal. The party running the tender would then shortlist the tenders identifying those bidders that would be given the right to build and operate a proportion of terminal capacity at the airport.

202 The second stage of the tender would involve the bidders providing revised bids that reflect a coordinated view on how the capacity lots would be designed in a manner that is operationally effective. The party running the tender would then review this proposal and either sign-off on the plan or require revisions to be made. BAA and CAA would both be expected to be consulted on proposals.

203 Our views on the advantages and disadvantages of having a two-stage tender, with multiple winners, are presented in Table 8. On balance, the gains from having a number of terminal operators, and an increased number of bidders in the tender, are expected to outweigh coordination concerns. These benefits and costs may need to be assessed on a case-by-case basis however.

Advantages	Disadvantages	Comment
Multiple terminal operators increase effectiveness of inter-terminal competition. Number of bidders likely to be higher as more parties are like to see benefit in operating a limited amount of capacity rather than a whole terminal.	Increased risk of collusion in tender. Coordination concerns, both in second stage of tender and in putting the proposals into operation. Difficult to assess combined bids in second stage of tender.	First stage of tender could be designed to manage risk of collusion.

Table 8: Assessment of outcome with multiple winners

4.4 LEASE CONTRACT

204 After the tender is awarded, the terminal operator will agree a lease contract with BAA. When designing the tender process, CAA would need to establish rules about what should be included in the contract. These would place general constraints on the contract, while the specific details would be a matter for bilateral agreement between BAA and the terminal operator. The general rules established for the lease contract could be replicated across a number of tenders.

205 Given the existence of market power overall at the airport, and the potential for foreclosure in the airline market, the terms of the lease contract will need to constrain behaviour of BAA and the terminal operator. Specific factors that would need to be included in the contract terms include the following.

- *Payments* – the terminal operator would not, under the proposed model, pay a fee to BAA when awarded the tender. The financial gain to BAA would be through the access charges that would be earned once the terminal facility is operational. However, if the terminal operator plans to build a terminal that will allow for capacity that is *below* the maximum access capacity, and there is no room for further terminal expansion at the airport, the operator would be required to pay a fee to compensate BAA for the opportunity cost of not being able to charge for movements up to the maximum capacity. This rule would ensure that the terminal operator does not have an incentive to constrain capacity so as to dampen any competition effects and would internalise the impact of constraining total airport capacity when costing its plans. If there is potential for further terminal expansion at the airport, it is presumed that BAA would earn the access revenue from the services provided through alternative terminal operators.
- *Timing of investment and use of capacity* – conditions would need to be placed on the timetable for the investment project, with penalties for late delivery. In addition, the terminal operator would need to be provided with an agreed time allowance over which capacity is to be filled, before conditions on third-party access are imposed.

- *Third-party access to terminal capacity* – restrictions could be placed on the terminal operator to ensure that all potential capacity was used or else made available to other airlines through third party access arrangements. The restriction could even require that a proportion of capacity is automatically shared with other airlines, if there are concerns about the terminal owner creating barriers to entry. Similar constraints are used in the US (see Annexe 1). As noted above, any 'use it or lose' it condition would come into affect after an agreed period of time (the time it would be expected to take the operator to fill capacity itself given demand expectations).
- *Length of lease* – the length of the lease would need to be sufficiently long to allow for the terminal operator to earn a reasonable return on its investment. The length should also be sufficiently long to allow airlines to transfer operations to the new terminal and establish themselves (not a costless exercise). However, it should be sufficiently short to allow for other potential operators to have access to the facility in the future.
- *Transfer of assets at end of lease* – the use of terminal assets would be transferred to BAA at the end of the contract. However, as noted earlier, BAA would be required to re-tender the right to operate the terminal capacity rather than automatically taking over operations itself. The contract would include details of the condition in which the assets would need to be at the termination date, including details of any costs or fees that would need to be transferred between the parties.
- *Early termination of contract* – conditions under which either the terminal operator or BAA could end the contract would also need to be included. In particular, provisions would need to be in place in the event that the terminal operator went bankrupt. These might be similar to 'supplier of last resort' conditions in other regulated industries. Constraints may also need to be placed on BAA to ensure that assets were not taken into its control, for future re-tendering, earlier than agreed.

206 In Section 5 we explain how the details of the lease contract can be used to address some of the concerns raised by CAA about the proposed approach to regulating capacity investment.

4.5 THE PRICE CONTROL

207 Under the proposed regulatory model there would be a number of different charges:

- charge paid by airlines to BAA for the use of access infrastructure (new and old);
- charge paid by airlines to BAA for the use of existing terminal capacity; and
- charge paid by airlines to the operator of a new terminal capacity for its use.

208 The proposed approach to regulating these charges is discussed here. In summary, the charge for access infrastructure would be subject to a price control. Provided adequate spare capacity is present, charges for the use of terminal services would be subject to general competition law but would not be subject to a specific price control.

4.5.1 Price control for access services

209 BAA will provide access services using existing and new access capacity. It is not operationally feasible to have airlines choosing which runway they use, consequently all access capacity must be bundled together when setting charges for the use of the capacity.

210 For charges, and a price control, to relate to all access services (new and existing), BAA will need to be able to provide cost information that separates these assets from those relating to the provision of services owned by the terminal operator. This should be possible through the use of clear accounting separation rules. The information would be immediately transparent if actual ownership of all terminals and access assets was fully separated.

211 Assuming separate information is available on the cost and usage of the access assets it is then necessary to set price controls for the use of these assets.

212 In principle it would be possible to continue setting prices for access assets in the same way that CAA currently sets overall maximum airport charges. In section 2, above, we highlighted the drawbacks with this current system of regulation. In that section we noted that one of the major problems of the current regime is the difficulty benchmarking the costs of terminal facilities. A move to the competitive provision of terminal facilities would alleviate one of the most difficult aspects of the regulatory regime.

213 Nevertheless, there are a number of drawbacks with the current CAA process, which we highlighted in Section 2 that could potentially remain under the proposed regulatory approach outlined in this report.

214 Under this proposal CAA would still have responsibility for setting regulated charges for access facilities, including runways. Moreover, as outlined above, because airlines cannot choose which runway, etc. to use, a common price would need to be set for all access assets, whether new or old.

215 This raises a number of problems:

- how to assess the cost of new access assets, including runways;
- how to set charges for their use so as to create the efficient incentives for use and investment over time; and
- how to price existing access assets if no new facilities are being built.

Assessment of cost

216 Under these proposals the CAA would still be responsible for regulating access charges and so, as with the current system of regulation, would need to have a process for identifying the efficient costs of developing access facilities.

217 This problem is nevertheless significantly more straightforward than the existing regulatory challenge, because, for new assets it is much easier to specify exactly what output is required by the airport and to obtain competitive tenders for the construction and / or operation of such facilities. Because this does not represent a new challenge compared to the status quo we do not consider we need to explore this matter in particular detail at this stage.

218 However, having identified a reasonable estimate of efficient costs it is then necessary to establish a regulated charge for the use of these assets that is appropriate over the long term.

219 As we highlighted above, current practice, involving recovery of accounting based costs over a single quinquennium, with the possible inclusion of pre-financing costs, leads to a time profile of prices with an inappropriate degree of front-end loading. In our view therefore, the opportunity to re-think the scope of regulated prices also gives a chance to re-think the method by which regulated charges are calculated.

How best to set charges

220 Economic theory suggest that, on average over the long run, the appropriate price that should be charged for the use of long lived assets will be long run marginal cost (LRMC). However LRMC is difficult and subjective to calculate in practice. An accepted approximation often used in regulatory situations is long run average incremental cost (LRAIC).

221 The LRAIC of the access capacity could be calculated using projections of required capital investment and ongoing operating expenditure (including maintenance expenditure) for a fixed period. The period would be expected to be consistent with the expected life of the asset, before it requires replacement (e.g. 25 years). The incremental capacity delivered by the investment would also be included in the calculation of LRAIC. The calculation also requires a projection of demand over the life of the asset to determine the charge per movement.

222 A price for the use of access assets based on LRAIC would have the property that it would be constant per passenger in real terms over the life of the asset. Thus it would not be front end loaded in the way current RAB-based prices tend to be.

223 Regulated prices based on estimates of LRAIC are routinely used in a number of regulated environments, most particularly in the regulation of telecommunications networks. As such, therefore, the application of LRAIC pricing to regulated problems is not a novel solution. As a pricing mechanism for access assets it may also be particularly well suited because of there is a close equivalence between LRAIC pricing and the charges that would be levied if the runway, etc., were paid for on a project finance basis. This would typically involve raising debt for the construction that would be repaid on a schedule linked to the usage of the assets, i.e. on a per passenger basis.

224 It could be argued that LRAIC figures assessed by a regulator are in fact an estimate of the project finance debt charges that would fund the infrastructure

investment. Such charges could in principle be used to directly set the charge level for access assets[18].

225 If actual investment is equal to the level of expected investment, demand meets capacity, and actual demand is equal to the level of expected demand, a price based on LRAIC will ensure that the net present value of the costs of operating the assets and providing access services are recovered by BAA over the life of the asset. Furthermore, the annual average charge would be consistent with the demand-led market prices.

226 If demand falls below capacity for some years (as is expected to be the case at the start of operations), the demand-led market price will be below the LRAIC. Thus even if the regulated price is set at LRAIC, the airport will not initially be able to recover this figure.

227 The market price would be expected to rise above LRAIC as capacity becomes constrained. As pointed out in our previous report on De-designation at Stansted, it will be necessary to allow prices above LRAIC at some point in the investment cycle to permit BAA to earn a sufficient return on its investment. But this would not be feasible if the maximum price cap were fixed at LRAIC. BAA therefore needs to be able to recover in some way the income associated with LRAIC at times when demand-led prices are lower. The rolling-forward of unused caps from one year to the next would allow for the income stream to be balanced in this way.

228 This requires a mechanism for rolling forward that correctly accounts for under- or over-recovery in any given period. An illustration of this process is shown in the figure below. This should not however present any difficulty for the regulatory process, as CAA's existing rules for price regulation allow for unused price limits to be carried forward to future periods on an NPV-neutral basis.

229 In a world of certainty, the LRAIC would only need to be calculated once at the start of the investment project and could remain as a cap over the life of the asset.

230 However, after LRAIC has initially been set, there would need to be a mechanism for periodically reassessing the level of charges to ensure full, but not excessive cost recovery over the life of the asset. In this respect there is also a similarity with project financing charges, which can be subject to periodic re-basing to ensure full recovery of the amount invested..

231 Rebasing of charges would be needed because in practice demand projections will be different to expectations and the LRAIC-based charge will therefore need to be revised periodically to protect against over- or under-recovery of costs. The current system of five-yearly reviews may be appropriate in this context, although a longer period may be viable if the risks associated with uncertainty can be managed by BAA. Nevertheless, under such a system of regulation BAA will be

18 We note however that regulators are understandably wary of directly linking regulated prices to actual costs in this way, for fear that the link will distort the incentive on all parties to minimise the costs involved.

exposed to risk only insofar as the exact timing over which costs are recovered may be somewhat uncertain. This fact should be reflected in the cost of financing that is assumed in the calculation of the LRAIC.

Pricing existing assets

232 We have already indicated that the charges for existing and new assets should be set at the same level, rather than regulated separately. Using LRAIC pricing means that there is a possibility in the transition from one price base (RAB) to another (LRAIC) that there may be a shift in the allowable charge for the use of existing assets. If such a shift were large enough it could be justified to apply some form of transitional arrangement to smooth the movement in charges.

233 In principle if the cost of new access infrastructure is materially higher than that for existing assets then shifting from a RAB based to a LRAIC base could lead to an increase in charges. On the face of it such an increase could be justified in terms of the fact that charges would have been adjusted to reflect the true long-run forward-looking cost of providing airport infrastructure. However we also note that other factors mitigate against the possibility of an increase, including the removal of the front-end loading bias inherent in the way RAB-based pricing has been applied to date. In addition, recognition of the relatively low risks inherent in the financing of new access infrastructure could lead to the application of a lower cost of capital than has been applied in the RAB system.

234 Nevertheless, there may be circumstances when it is necessary to persist with a RAB based approach to pricing access assets. In particular if the extent of investment in new infrastructure is very small, or the nature of the new development is very different to the existing assets, then the LRAIC may be impossible to compute or may be unrepresentative of the efficient price for existing assets.

235 If it were to prove unavoidable to continue with a RAB-based approach it remains our view that new and existing access assets would need to be priced on a consistent basis, and so the RAB would need to apply to new assets (e.g. new runways) as well as existing facilities. Furthermore, it would be essential that this RAB would only apply to access assets and did not include costs relating to terminal facilities which costs would, in our proposal, be recovered through competitively determined charges for the use of terminal facilities.

236 Nevertheless, even if it were to prove necessary to persist with a RAB-based approach for calculating access charges, it should be possible to address the issues of pre-funding and accelerated cost recovery that have affected the current system.

237 Pre-funding can in our view always be dealt with by logging up of the expenditure, with interest, to the date that operation begins, and only once operation commences does the compounded value enter the RAB. This is routine procedure in other regulatory regimes. If the airport is unable to gain financing to cover the investment to the date of vesting then this should be taken as an indication that the market does not currently justify the investment in economic terms.

238 Accelerated repayment can be addressed by adopting a long term approach to calculating charges. RAB can be used, but "economic" depreciation rather than straight line accounting depreciation should be used for calculating capital charges in any five year period. Economic depreciation in this case would be calculated pro rata to the expected throughput of passengers over time. This being low in the early years of the new investment so will be economic depreciation charges. The effect on revenue of economic depreciation under a RAB-based approach was illustrated in previously in Figure 4, which is reproduced again below. This illustrates the way in which revenues under a system of economic depreciation follow the growth of passenger numbers up to the point where the asset becomes constrained. At that point charges would be capped from further increase to prevent the airport operator exploiting the additional market power given to it by the capacity constraint.

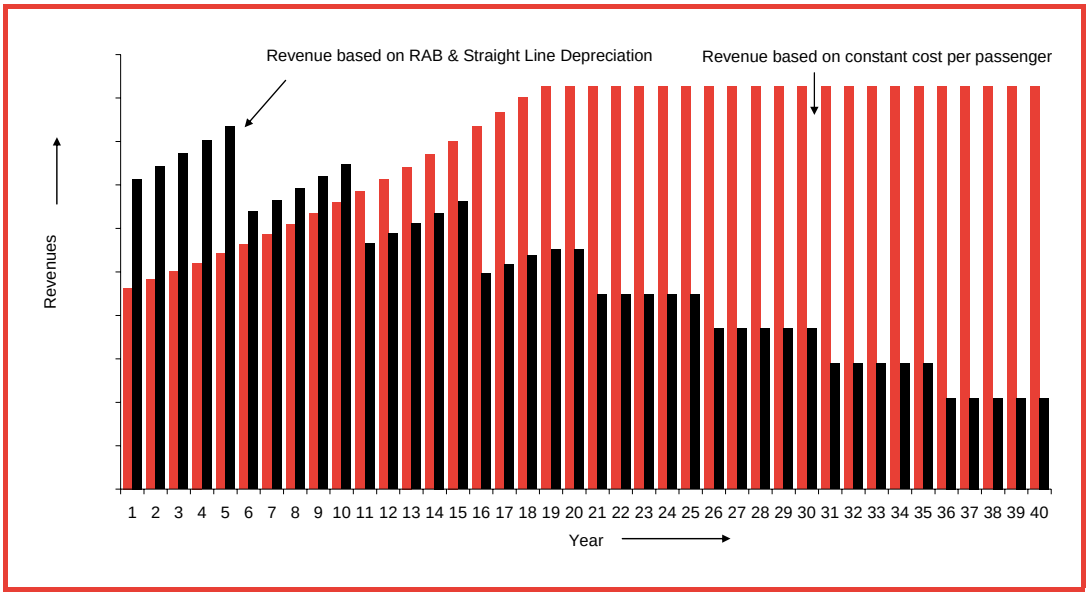

Figure 7: Revenues implied by application of straight-line or economic depreciation (reproduced)

4.5.2 Price of new terminal services

239 The operator of new terminal services would be required to provide access to their terminal for a charge at a level that was consistent with the level included in the operator's winning bid for the tender. This 'safeguard cap' itself would be constrained by competitive forces, through the tender process.

240 The terminal operator would be able to charge different airlines different amounts if the services being provided varied in quality. All charges would be subject to a standard competition test to ensure that they were fair, reasonable and non-discriminatory. In particular the terminal operator would not be prohibited from charging more than the safeguard cap, provided the airline was a willing partner in this arrangement. As the airline would have a right to access at the safeguard price, it should only be willing to negotiate a higher price in exchange for additional services from the terminal operator on which it placed

sufficient value. Similarly, the terminal operator could offer lower charges to some airlines and not to others (e.g. 'bulk-type' discounts to large carriers) so long as these are consistent with competition law.

241 Guidance may be required on how the competition test might be applied, particularly given the potentially complicated nature of the 'quality' of the service being provided.

4.5.3 Price of existing terminal services

242 As discussed above, the provision of existing terminal services would be separated (at least in accounting terms) from the provision of access facilities. The charge for existing terminal facilities would be constrained by the level of demand for these services and the price for alternative services at the new terminal.

243 The market would therefore be expected to provide control of the price for existing terminal facilities and a separate price control should therefore not be needed, assuming the existence of effective inter-terminal competition. These terminal charges would also be subject to a fair, reasonable and non-discriminatory requirement under competition law.

4.6 MONITORING

244 Monitoring by the CAA and other regulators would be required after a framework for tendering is established. The main types of monitoring that will be required are as follows.

- *Monitor tender process:* all tenders will need to be monitored to ensure that they comply with the tender rules and with general competition law. We expect that the responsibility for this monitoring would rest with CAA and the OFT. If CAA was provided with concurrency powers under the Competition Act 1998, it may be better placed to monitor the tender process. This would, however, preclude CAA from running the tender process. Tenders would not be run on a very frequent basis and, hence, the regulatory burden is not expected to be significant.
- *Monitor airport operations*: activities at the airport will need to be monitored to ensure that the level of service is appropriate and consistent with the requirements placed on both BAA and the terminal operator (in the lease contract). The burden is expected to be no greater than now.
- *Monitor regulated charges*: as now, CAA will be responsible for ensuring that regulated charges are consistent with the price cap. The burden will be less than now as the regulations apply to a distinct set of charges for access only.
- *Monitor other charges and operator behaviour:* the OFT will need to ensure that all charges are fair, reasonable and non-discriminatory and that behaviour of BAA (as terminal operator) and the new terminal operator is consistent with competition law. It is expected, as in other sectors, that the amount of resources invested in reviewing these charges will depend on the extent to which there are complaints about the charges.

- *Monitor lease contract:* BAA will be responsible for ensuring that the terminal operator adheres to the terms of the lease contract. Significant concerns could be brought to the attention of the CAA or OFT (e.g. concerns about capacity not being used and not being sub-leased). Similarly, the terminal operator would need to have recourse to an appeal body (possibly the CAA), in disputes about BAA's behaviour relative to the lease arise. Finally, the CAA (and potentially the OFT) would need to ensure that lease conditions were non-discriminatory in cases where there was potential for more than one terminal operator to exist. This could apply to any 'implicit' internal contract between the BAA as 'access provider' and BAA as 'terminal operator'.

245 We envisage that tenders would be run infrequently and that a clear structure and framework for running tenders will be in place. The additional monitoring associated with the tender process is expected to be limited over time therefore. There is an upfront cost to designing the tender structure and monitoring the early tenders. The additional monitoring required (e.g. of service or of compliance with competition law) is consistent with what is required in the current regulatory model.

5 Addressing potential concerns

246 CAA has raised a number of potential concerns with the proposed approach to regulating capacity investment, and the introduction of inter-terminal competition more generally[19]. The main concerns are discussed here and we present our counter-arguments.

247 The concerns raised by CAA can be categorised as follows.

- *Operational complexity:* inter-terminal competition will be complex from an operational perspective, requiring increased coordination at the airport and thereby increasing transaction costs.
- *Investment distortion*: the tendering process, and the establishment of a price control for existing assets that is linked to the price of new assets, will distort BAA's investment incentives and, potentially, incentives to bid in the tender. In addition, long-term investment planning at the airport will be disjointed.
- *Efficient use of capacity*: there is a concern that new terminal capacity will be built and existing terminal capacity will be left dormant (stranded). There is also a concern that the capacity of the new terminal will fall short of the potential capacity of the new runway.
- *Monopoly rent*: profits earned at the airport will be distributed from BAA to the terminal operator (potentially legacy airlines), without any benefit for passengers or end users.
- *Regulatory costs*: CAA will become more involved in the day-to-day running of the airport and will be responsible for arranging, running and monitoring the tender process. This will increase the costs of regulation.
- *Airline competition*: there is concern that if airlines operate terminals at an airport they will be in a position to foreclose entry into the airline market.
- *Incentives*: BAA may have incentives, under the price control framework, to favour capital expenditure over operating expenditure and/or to spend higher levels of capital expenditure than required.
- *Legal limitations*: CAA does not have the legal powers to prevent BAA from building terminal capacity themselves or to require BAA to allow others terminal operators to build and operate capacity at an airport.

248 We discuss each of these concerns in turn.

249 We would stress that the benefits arising from our proposals outweigh any expected costs presented by CAA – tendering for terminal facilities and the creation of inter-terminal competition creates incentives for capacity investment and on-going provision of services that are consistent with market demand; at

19 See 'Price control review – consultation on the framework and options for the economic regulation of Stansted Airport', January 2008; 'Airport price control review – policy update', May 2006; 'Airport price control review – consultation on policy issues', December 2005; 'Competitive Provision of Infrastructure and Services Within Airports', 2001.]

the same time price controls are retained for the core bottleneck facilities to ensure monopoly rent is controlled. This is particularly the case when the risks identified by the CAA are managed through the appropriate specification of tender rules, the design of the price control and the terms of the lease contract.

5.1 OPERATIONAL COMPLEXITY

250 CAA has argued that the inter-terminal competition that arises in our approach would be difficult to implement from an operational perspective and could reduce the benefits associated with being flexible in the use of terminal capacity at an airport. There is a related concern that transaction costs would be increased because of the need for layers of coordination when there is more than one terminal operator.

251 We do not think this would be the case. In the first instance, coordination would continue to be undertaken by the airport coordinator, NATS and BAA. Current arrangements include managing coordination of airspace, approach and facilities on a terminal-by-terminal basis and this would not change. The only difference would be that an additional terminal operator (or operators) would be involved in coordination arrangements.

252 Furthermore, long-term coordination and planning at the airport continues to rest with BAA through the Master Plan and it is expected that there would be provisions in the lease contracts to ensure that any significant coordination issues are managed effectively. There would be some upfront costs associated with establishing the new structure at an airport, but it is expected that once established it would be relatively straightforward to roll-out over time and potentially across other new terminals.

253 As discussed in Annexe 1, there are a number of airports around the world, particularly in the US, where airport operators lease terminal facilities to third parties (including airlines). These airports continue to operate effectively and CAA has not provided any evidence of operational complexities or concerns at these airports. We would therefore ask CAA why the approach that is operationally feasible in the US is not feasible in a UK airport?

5.2 INVESTMENT DISTORTION

254 CAA raises three particular concerns with the impact of our proposed approach to regulating capacity on investment incentives.

- BAA will have an incentive to overinvest in new runway because the regulated charge on existing runway assets will be linked to the price for new facilities.
- Airlines using existing facilities will not wish to participate in the tender because they know that the regulated charges at the existing terminal will change to reflect the increased charges at the new terminal.
- Long-term planning at the airport will be disjointed.

255 The first issue is not in fact related to the approach we have set out here because runway expansion, as opposed to terminal expansion, is effectively independently controlled by Government policy. In the London area the Government has approved additional runways at Heathrow and Stansted in the face of overwhelming evidence that growing demand will support this expansion. BAA is not free independently to choose to add additional runways at these airports or at Gatwick. Hence it is unclear how the supposed tendency to over-invest in runway capacity could be expressed.

256 Furthermore, the tendering of terminal facilities would act as a check on any attempt to over-expand runway capacity. As described in Section 4.3.1 above, if the competitive market does not want to provide terminal capacity to accompany a new runway then this acts as a signal that the runway is not needed at that stage. If there are bids to provide terminal capacity then the market is signalling that there is demand for the new runway capacity.

257 The second concern stems from the misunderstanding that prices at existing terminals would be linked by regulation to the price at new terminals. Our proposed approach does not establish such a link. Indeed such a link is unnecessary. Terminal charges are linked only through competition in the market, with the 'safeguard cap' on charges at the new terminal being set through the bidding process.

258 The third concern is also not an issue in our proposal. BAA (in consultation with other parties and subject to regulatory approval) is responsible for long-term planning at the airport through the Master Plan and has ultimate ownership of all the assets. BAA would also continue to be responsible for planning negotiations, including potentially seeking clearance on the terminal that is chosen through the tender process. A centralised system for long-term planning therefore exists, subject to the constraint that BAA must act in accordance with the conditions of any existing lease contracts. Indeed the process for long-term planning at the airport may be virtually the same under the model we propose as it is at present.

5.3 EFFICIENT USE OF CAPACITY

259 CAA has expressed a concern that when new capacity is built it will simply transfer operations from one terminal to another, resulting in stranding of some terminal capacity. There is also a concern that runway capacity will be unused if the terminal investment does not provide a capacity that is consistent with the runway design.

260 The Master Plan, and hence central planning, ultimately determines the need for new capacity. There must therefore be an expectation that, over time, the additional capacity will be used by an increased demand. Importantly, in the meantime, the existence of spare capacity will act as a competitive constraint. This may be spare capacity within a terminal, across terminals or in the airport overall, with the potential for new terminals to be built in the future. Over time the unused capacity in one terminal (either the new or the old depending on what is offered to airlines) will be used, assuming demand grows at the projected rate.

261 Competitive forces would determine whether new or old terminal capacity filled up first, putting pressure on BAA and any new terminal operator to deliver terminal facilities consistent with market demand. The idea that old capacity would simply be stranded neglects the fact that the price charged for existing capacity could also adjust to keep it competitive with new facilities. If the problem with existing facilities is that they are of inadequate quality to compete then this does not seem to be a rationale for protecting them. Rather, competitive pressure would encourage investment in refurbishing these facilities to re-establish their competitiveness.

5.4 MONOPOLY RENTS

262 The proposed approach to regulating capacity would only be used at airports that are designated. There is thus a presumption that there is market power at the airport in question. CAA is concerned that the approach would simply transfer this power from BAA to the terminal operator, and will not deliver any benefit to end users. This would not be the case.

263 A significant proportion of the value of the assets at the airport (i.e. the access facilities) continue to be regulated. The control on market power in this area is therefore the same as under the current regulatory system, and could potentially be better given the market cross-check on new access capacity investment.

264 Competition through the tendering process, and between terminals after the tendering process, would prevent the generation of monopoly rents in the provision of terminal facilities services. The only requirement for this is that there are at least two terminal operators and that there is spare terminal capacity in line with the analysis set out in section 3.4 above.

265 Our proposed approach to regulating airport capacity is therefore expected to be better at managing the level of monopoly rents than the existing regulatory structure, allowing competitive forces and regulation to work together to manage potential market power.

5.5 REGULATORY COSTS

266 The CAA are concerned that our proposed approach will increase the level of regulatory involvement in day-to-day airport operations and that there will be increased regulatory costs. This will not be the case.

267 The approach to regulation is not expected to result in more regulatory intervention at the airport. Indeed, the market is expected to determine the required level of investment, thereby removing this requirement that currently exists in price reviews from CAA. Otherwise, CAA would not be involved in anyway in the day-to-day operations of the airport.

268 Furthermore, a significant part of the CAA's current activities are spent in monitoring and regulating the provision of terminal facilities. For example, in the final determination for the price controls for Heathrow and Gatwick, CAA's discussion on operating expenditure took up seventeen pages, ten of which related to costs at the terminal (e.g. security costs). Furthermore, the discussion

on capital investment at Gatwick was entirely related to terminal infrastructure. Under these proposals however CAA would largely be relieved of the need to assess such activities.

269 The scope for regulation would rather be reduced to consideration of the charge levied for access services. CAA is already responsible for these charges.

270 We note, however, that there would be upfront costs for the design of a tender framework, and costs associated with running and monitoring the tender. The number of tenders will be limited and therefore the magnitude of the costs is expected to be manageable. Furthermore, over time, the costs associated with each tender will be lower as the overall framework only needs to be established once.

5.6 AIRLINE COMPETITION

271 CAA, and other parties, have raised a concern that if an airline wins the tender, it could create a barrier to entry for new airlines at the airport. If an airline is left unchecked operating a terminal then this may be a real risk. However, as has been done in the US (see Annexe 1), clauses can be included in the lease contract to require a proportion of capacity to be provided to other airlines through third-party access agreements. As discussed in Section 4.4, this can apply to capacity that has been unused for a set period of time or the requirement could be for a fixed proportion of capacity (independent of whether or not the airline could use it).

272 Furthermore, as the tender process itself is open, this provides the opportunity for new airlines to enter the market by becoming the terminal operator themselves. The more opportunities there are for new capacity investment to be tendered (e.g. through sequential lots), the greater the opportunity for new airlines to enter.

273 Finally, any significant concerns in the airline market could be addressed through standard competition law.

5.7 INCENTIVES

274 CAA has argued, in Table 12-1 of its 2008 report, that our proposed approach to regulation could provide incentives for investment in capital expenditure rather than operating expenditure, and could provide incentives for over investment in existing assets (to boost the price cap). CAA recognises that these problems also exist with the current regulatory regime.

275 This objection has no merit.

276 Access facilities would remain regulated. There is no reason to suppose the incentive to over-invest in these assets would increase, or indeed change, as a result of the model we propose.

277 Furthermore, the introduction of a new regulatory structure for access charges provides the opportunity to revise the way in which controls are calculated to improve the efficiency of investment relative to the current regime. Regulators in

other sectors, and indeed CAA itself in the case of airports, have introduced a number of remedies to deal with these problems and there is no reason why such provisions could not be included in the design of the access price control.

278 Terminal facilities on the other hand would be "regulated" by competition, not by price cap. Over-provision would be discouraged because of the risk that this would suppress the charges for these facilities.

5.8 LEGAL CONSTRAINT

279 CAA argues that our proposed regulatory approach is not feasible as it does not have the legal power to implement the required changes. In particular, it does not have the legal right to prevent BAA from developing new terminal capacity but to require it to be opened up to tender instead. CAA does, however, suggest that the Competition Commission may have broader powers in this regard.

Legal examination of the Airports Act and other related legislation (including the privatisation provisions of BAA Plc) is required to determine what constraints exist that would prevent this model from being introduced. Furthermore, an analysis of how these legal constraints could be removed would also be warranted. We would suggest that the current Competition Commission investigation into the airports market, and the forthcoming review of the price control for Stansted Airport, are used to undertake such a review.

6 Conclusions

280 We have presented a high level overview of an approach to airport regulation that would allow for the introduction of inter-terminal competition (through a tendering process) and the regulation of core bottleneck (access) facilities at an airport. The focus is on new capacity investment, although many of the ideas can be translated into a more general framework for regulating existing terminal capacity if spare capacity exists.

281 The main advantage of this approach is that is provides the opportunity for new capacity investment to be provided in a timeframe, and to a specification, that is consistent with demand. The benefits arise for both terminal investment and access investment (as the tender provides a market cross-check on the runway/access proposal). This is a significant benefit relative to the current regulatory model that has failed to provide incentives for capacity to be developed in a timely way or to a specification that reflects the heterogeneity of demand in the airline market.

282 The creation of inter-terminal competition provides on-going constraint on BAA (as terminal operator) and all other terminal operators, ensuring that market demand is met both with respect to the level of charges and the quality of service provided. In this way, the regulatory approach allows for market dynamics to manage the ongoing provision of terminal services at the airport.

283 Furthermore, the framework allows for the methodology for setting a price control for access charges to be revised, to smooth the profile of prices over time while ensuring that the investment is recovered (in net present value terms) over the life of the assets. In this way, the approach to regulation is an improvement on the existing regime.

284 The discussion in this report is intended to provide a basis for further debate on the regulatory approach that separates terminal and access facilities, introduces inter-terminal competition, through tendering, and constrains access charges through a price control. The benefits of our proposal, relative to the current regime, have been discussed. Going forward, it would be desirable for the focus to be on developing options for ensuring that the benefits of the framework are maximised. In particular, further analysis of the precise design of the tendering framework is required (i.e. a consideration of the costs and benefits of different design options).

285 Finally, we stress that while this report was triggered by the capacity investment proposals at Stansted, it is envisaged that a similar approach could be adopted at other airports where there is market power and spare terminal capacity (with some uncertainty, we think the level of required spare terminal capacity is around 10%). The application of the regulatory approach to a range of situations warrants further attention.

Annexe 1: Evidence on feasibility of proposal

286 The main body of the report has argued the case for separating the provision of terminal services from access services at an airport, and tendering the right to provide terminal services. One potential criticism of this model is that it is not feasible as it would be too complex operationally to implement. However, evidence from a number of airports suggests otherwise.

287 Specifically, a number of airports (particularly in the US) have successfully separated the provision of access services from the operation of terminals at an airport. In these airports there is a role for third parties, including airlines, in providing terminal services and investing in terminal capacity[20]. There is also evidence, in other airports, of a tendering process being used to determine the provider (or providers) of terminal services.

288 Details of these examples are presented here and lessons for airport regulation are explored. The extent of the evidence confirms that the proposed regulatory model is feasible. The question then is why it can not be implemented in the UK, or indeed in the EU more widely.

OVERVIEW

289 In this annex evidence, mainly from the US, is provided suggesting that the separation of terminal operations from access services at an airport is feasible. Evidence is also provided on solutions that have been used in the US to address potential competitive concerns resulting from airline participation in the provision of services at an airport. In addition, airline investment in terminals in the EU (but not participation in operation of the terminals) is reviewed. Finally, evidence is provided on the use of open tenders to determine the provider of terminal services at an airport.

290 The assessment of a wide number of cases shows that:

- there are many examples of multiple companies operating different parts of the airport, namely terminals, especially in the US but also in other countries;
- airlines are amongst the companies operating these terminals, and special regulatory mechanisms have been introduced to address the risk of airline foreclosure;
- regulation (including competition policy) is required to establish the constraints on the contractual relations between the airport operator and another company operating the terminal and to monitor enforcement of

20 In fact it is quite common to see separation of non-passenger activities such as cargo and handling from the remaining activities of the airport. Airlines, in particular, actively participate in the management and operation of some of these facilities, especially in cargo and aircraft maintenance activities.

these constraints and general behaviour in the airport (e.g. relating to foreclosure of other airlines or discriminatory pricing by the airport operator);

- participation of parties, other than the airport operator, in the provision of terminal services has been determined through bilateral negotiations in some cases and through a tendering process in others; and
- the success of tendering suggests that there is a market for the building and operation of terminal services, with sufficient parties expressing interest in participating in the tenders[21] .

291 The table below presents a geographical distribution of twenty two passenger terminals where the operation of terminals has been separated from the remaining airport activities. This reflects a series of case studies undertaken for this report. Other examples may exist and this is therefore not considered an exhaustive list.

21 For example, according to the Panel reporting to the Department of Transport, 'a total of thirteen organisations or consortia submitted expressions of interest' to develop a second terminal at Dublin airport (p37 of Panel 2003 report). This provides a strong indication of a market for the building and operation of terminal facilities.

Annexe 1: Evidence on feasibility of proposal

Region	Airport (No of terminals)	Separated terminals	Terminal operator	Airport operator	Airport operator terminals
US	JFK New York (8)	Terminal 1	TOMI (Air France, Lufthansa, JAL, Korean Airlines)	NY & NJ Port Authority	0
		Terminal 2 & 3	Delta Airlines		
		Terminal 4	IAT (LCOR, Schipol, Lehman Bros)		
		Terminal 5 & 6	JetBlue		
		Terminal 7	British Airways		
		Terminal 8	American Airlines		
	Boston Logan (4)	Terminal A	Delta Airlines	Massachusetts Port Authority	2
		Terminal B	United /US Airlines		
	La Guardia (4)	Delta Terminal	Delta Airlines	NY & NJ Port Authority	2
		US Airways Terminal	US Airways		
	Newark (3)	Terminal C	Continental Airlines	NY & NJ Port Authority	2
	Chicago O'Hare (4)	Terminal 1	United Airlines	City of Chicago Department of Aviation	2
		Terminal 3	American Airlines		
	Northern Kentucky Intl. (3)	Terminal 3	Delta Airlines	Kenton County Airport Board	1
	Charlotte/ Douglas Intl. (1)	Terminal	US Airways	City of Charlotte	0
	Minneapolis/St Paul (2)	Terminal	Northwest Airlines	Metropolitan Airports Commission	1

Annexe 1: Evidence on feasibility of proposal

Region	Airport (No of terminals)	Separated terminals	Terminal operator	Airport operator	Airport operator terminals
Canada	Lester B. Pearson Toronto (3)	Terminal 3 *	TTLP (Terminal Three Limited Partnership)	GTAA (previously GACC)	1
Europe	Prague Intl. (Czech Republic) (2)	Terminal 2 (Tender)	PIADC (Bouygues and Schipol)	Czech Airport Authority	1
	Budapest Ferihegy (Hungary) (2)	Terminal 2* (Tender)	ADC (Aeroport Montreal)	Budapest Airport	1
	Antalya Intl. (Turkey) (2)	International Terminal 2 (Tender)	Celbi (Turkish operator)	Fraport	2

Table 9: Separated terminal operations

Source: CNI, Airport sites, Airport operator sites, other
*Note: * These terminals have re-entered the airport operator control. Lester B. Pearson terminal was acquired by GACC and Budapest Ferihegy was expropriated by the Hungarian government.*

292 The evidence presented in this section suggests that separation of terminal operations, and even airline participation in the provision of terminal services, is operationally feasible. The fact that the model has been used in a number of different instances also suggests that it is not overly complex to administer or regulate, although the setting up of the system may involve some upfront costs. It is therefore a model that could be considered for UK airports.

293 The remainder of the Annexe is structured as follows.

- First, examples from the US are considered. This country provides the most complete examples of separated passenger terminal operations. Airline terminal management the rule rather than the exception, and a regulatory framework has been developed to address the issue of airline foreclosure.
- Second, examples of cases where airlines have invested in terminal expansions in European airports are considered. Airlines are not formally responsible for operation of the terminals but contractual relationships and joint ventures between airlines and airport operators exist, allowing airlines to have substantial influence over the construction and operation of passenger terminals.
- Both in the US and in Europe, terminal operations are normally negotiated bilaterally between the parties. At the end of this annex attention is given to international tenders for the construction and operation of passenger terminals.

Terminal operations in the US

294 Airports in the US are characterised by state ownership, state rules, and private investment. They are normally owned by local non-profit government agencies called airport authorities. These authorities are under several regulatory

obligations. Some of these obligations are imposed by law and other, additional obligations, are imposed whenever these authorities apply for public funds (which they normally do in order to finance some of their investments). Regulations imposed by law are enacted by the US Congress, while the fund related rules are imposed by the Federal Aviation Authority (FAA)[22]. Together, they set the obligations associated to any airport authority.

295 Although airport authorities own all the main infra-structures in an airport, they will not necessarily operate all of these infra-structures. Airport authorities will normally operate the runway and airport's common facilities. The extent of private participation in terminal operations will vary from airport to airport. The JFK airport, for example, is operated by the New York and New Jersey Port Authority (NYNJPA). The NYNJPA owns the main infra-structures at the airport, including the runway and all the passenger terminals. However, the NYNJPA does not operate any of the nine terminals. These are operated by Delta Airlines, T4 (consortium of private investors), JetBlue, British Airways, TOMI (consortium of several airlines), and American Airlines. In other cases, however, both airlines and airport authorities operate terminals (e.g. Boston Logan airport). Finally, in some airports the authority operates all the passenger terminals (e.g. Portland International Airport). The next paragraphs will deal with airports with separated terminal operations. Below the main features of these terminals are highlighted:

- Airport authorities own the airport infra-structures and retain terminal ownership, even if airlines or other operators build and operate the terminal;
- Airport authorities operate part or all of the airport activities (e.g. runway, terminals);
- Airport authorities charge airlines for the use of the airfield (e.g. runway) at cost based rates and lease terminal gates to airlines in terms agreed by negotiation;
- The choice of the entity operating a new terminal is normally the outcome of an informal process of bilateral negotiations; and
- Airlines that operate terminals normally have to satisfy minimum capacity (gates) use conditions.

296 The next paragraphs describe in more detail the role of airport authorities and leasing contracts.

Airport regulatory framework

297 The Federal Aviation Act of 1958 and the Airport Deregulation Act of 1978 set the basic principles that regulate airports' activity. In addition, if an airport

22 The FAA is an agency within the US Department of Transport that administers the grant distribution of the Airport Improvement Program. It is also responsible for the national air traffic control system and safety and security regulations.

authority receives public grants or is permitted to charge Passenger Facility Charges (special charges requiring FAA authorisation) it will be subject to specific obligations[23]. This legislative framework requires, *inter alia*, that airport authorities:

- Charge fees for the use of the airfield (e.g. use of the runway and parking) on the basis of costs[24];
- Provide airlines with reasonable access to airport services and facilities (such as slots and gates) in a non-discriminatory way; and
- Do not give exclusive rights to airlines that will have the effect of excluding other airlines from using the airport[25].

298 Airports authorities have the legal and contractual obligation to enforce these regulatory rules. They are able to do so because they hold the propriety rights over airport infra-structures. These "proprietary powers" allow them to charge airlines for the use of the airfield and to contract with other parties the operation of parts of the airport. Any such agreement must be consistent with the regulatory rules set in the legislation identified above.

299 Apart from the regulatory safeguards circumscribing airport authorities' behaviour, leasing agreements between airport authorities and airlines must also respect antitrust laws affecting airline behaviour. In fact, the US Department of Transport (DOT) has the authority to prohibit any anti-competitive airline practice (49 USC 41712) such as tying and foreclosure[26].

300 Within these limits, airport authorities have the freedom to set the specific charges and to restrict airlines use of airport facilities (49 USC 41713)[27]. The particular features of each airport regulatory framework are set in the different leasing agreements contracted between the airport authority and the other operators.

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23 These obligations are expressed in several FAA orders. An example is the *Airport Compliance Requirements*, FAA Order 5190.6A by which the airport operator is obliged to make all airport facilities and services available on fair and reasonable terms and without discrimination.

24 The cost-to-service approach taken for airfield use is comparable to the common practice for setting fees in other US regulated utilities. For other aeronautical facilities (such as terminals), the Department of Transport has a more flexible approach and allows more scope for private negotiation between the parties, subject to the other regulatory rules. See *Policy Regarding Airport Rates and Charges*, FAA, June 1996.

25 Airport Business Practices and their Impact on Airline Competition, FAA/OST Task Force, October 1999

26 Public owned airport anticompetitive practices are dismissed under the state action doctrine shielding state and local governments (and public owned airports) from antitrust liabilities associated to the Sherman Act. Therefore antitrust enforcement is generally limited to airlines practices at airports.

27 Airport charges can for example differ between signatory airlines (which sign long term contracts with the airports) and the non-signatory airlines because the latter entail airport revenue uncertainty. See the DOT/FAA's *Policy Regarding Airport Rates and Charges*, 61 FR 31994, para 3.1.1.

Airport agreements

301 The initiative to build a new terminal can come either from the airport (as in the case of JFK's Terminal 4) or from an investor, normally an airline[28] (as it is generally the case). In either situation, a bilateral negotiation process will normally follow the expression of interest for terminal expansion. According to the examples reviewed for the US in this annex, it is not common to use an open tender to choose the new terminal operator[29]. When negotiations succeed, the airline and the operator will sign a bilateral lease agreement where the main terms and conditions associated to the construction and operation of the terminal are determined. In this contract, the airport authority will include the necessary clauses to ensure that the various legal rules governing airport operations are respected. The FAA, the DOT and the US courts can each enforce these legal obligations. In conclusion, a process driven by airline initiative and bilateral negotiations with airport authorities allows US airports to increase terminal capacity according to market (airlines') needs.

302 It is clear from the previous paragraphs that leasing agreements form an important part of the "US model". Some of the main characteristics of leasing agreements are described below. We can normally distinguish two types of leasing agreements:

- **Master Agreements**. These are common agreements between the airport and some airlines (called signatory airlines) using the airport facilities. Typically they will define a rate method for allocating common airport facilities costs (such as runways) to all airlines. These rates will reflect the cost of using those facilities[30]. They will also set other conditions on airport governance. In the Detroit Metropolitan Airport, for example, the Master agreement between the Wayne County Airport Authority (WCAA) and the airlines has a Majority-In-Interest (MII) clause that prevents WCAA from taking major decisions, such as expanding capacity, without the agreement of the majority of airlines using the airport.
- **Bilateral Agreements.** These are specific agreements between one airline and the airport authority. In the case of airport authorities' operated terminals, these agreements will set the fees paid by the airlines. These can

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28 The consortium IAT which operates terminal four at JFK since 2001 was the first private non-airline entity to operate a terminal in the US. Schipol Airport, by participating in the IAT consortium, became the first non-American airport operator to run a passenger terminal in the US.

29 The search for the Terminal 4 operator in the JFK airport was a perhaps widest in geographical scope. However, even in this case there does not seem to have been a open tender but rather a series of negotiation processes.

30 Different cost allocation schemes can be agreed. Therefore different master lease agreements can be distinguished:

-residual agreements: allocation of airport cost (minus revenues associated to non aviation activities and to non-signatory airlines) to signatory companies;

-compensatory agreement: allocation of opex and a pro rata share of debt service associated to the facilities actually used by airlines;

-hybrid agreements: contain both compensatory and residual elements.

sometimes vary from airline to airline, as long as it is not considered discriminatory. Northwest Airlines, for example, accounts for c.80% of the Detroit Metropolitan Airport activity and is charged a negotiated (presumably lower) rate that is different from other airlines operating in the airport[31]. Airlines having invested in the infrastructure of their own terminal will not have to pay fees but may still be subject to contractual clauses restricting the way they use their terminals. Two contractual elements are crucial in reducing the ability of airlines operating terminals to foreclose other airlines – gate usage clauses and the term length of the contract. Gate usage clauses can be classified as:

1. Preferential use agreements, where airlines are tied to a minimum gate usage through "take-it-or-leave-it" or "take-it-or-share-it" clauses; and
2. Exclusive use agreements, where airlines have no restrictions in terms of gate usage. In this case, the exclusive right is still subject to other airlines having the possibility to use other airport terminals.

303 The lease agreement contracted by the Massachusetts Port Authority (which owns Boston Logan Airport), for example, includes a "share-it-or-leave-it" clause whereby the airline terminal operator must sublease any terminal capacity not being used. The terms and conditions defining non-used capacity will vary from contract to contract. Normally a minimal use of the available capacity is agreed. If the airline fails to use that minimum capacity over some given period, the airport authority might request that the spare capacity is open to other airlines.

304 Another crucial feature of bilateral contracts is its term length. In these respect bilateral contracts can vary:

1. Long term contracts are the rule for terminals that are built and operated by private investors, including airlines. They are also used by large airlines with a substantial number of flights in a given airport.
2. Short term agreements are normally contracted by non-signatory airlines having a limited number of routes departing from the airport. These contracts make it easier for airlines to initiate or terminate operations at a given airport when they feel necessary.

The "US model" has been widely discussed by the economic literature, especially its propensity to allow airlines to foreclose competitors by vertically integrating terminal operations. The paragraphs below highlight some of the points raised about the merits of this model.

Debate on the "US model"

305 Many authors in the US consider airline-airport agreements can create barriers to entry and violate anti-trust laws[32]. According to these authors, there is potentially

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31 *Contracts, Financing arrangements, and Public Ownership*, Johannes Fuhr and Thorsten Beckers, 2007.

32 There is an important literature on this issue. For a recent article see *Access to Airport Facilities: Its Impacts on Market Competition*, Hartmann, p369-384 in D. Lee (Ed.) Advances in Airline Economics (vol.1)

Annexe 1: Evidence on feasibility of proposal

an incentive for airlines to try to prevent competitors from having access to airport passenger terminal facilities (or at least to raise the costs associated to this access). There is some evidence linking foreclosure to some types of contractual arrangements. A report from the General Accounting Office in 1999 found that airports where airlines reported difficulty gaining competitive access to gates had most of the gates under a long-term exclusive-use leasing agreements with one incumbent dominant airline[33]. Moreover, the study found that airfares at those airports were higher than in comparable sized airports[34]. These issues have been a major concern and have led the FAA to launch a study on airport business practices[35]. This study concluded that some contractual arrangements between airlines and airports can foster airline competition (e.g. the use of preferential-use agreements) while other arrangements can preclude entry (exclusive-rights use and long-term contracts). It also cited examples of airports using airport-controlled gates (i.e. in airport operated terminals) to promote airline entry (e.g. Phoenix Airport). Additionally, the same study found that some airport authorities were introducing upper limits to sublease fees which could reduce the scope for airline foreclosure. According to the study, five large hubs (Baltimore-Washington International, Reagan Washington National, San Francisco, Seattle, and Washington Dulles) reported that their agreements contained limits to sublease fees' mark-ups of 10% to 50% of their primary rate.

306 One other issue that has been considered to be problematic in the "US Model" is the use of MII clauses in master agreements. While these protect incumbent airlines from arbitrary decisions of the airport authority, they could also be used to prevent entrance of other airlines[36]. It is argued that airlines can protect their routes from competition by systematically objecting to any expansion of airport capacity. Although this seems a legitimate concern and might occur in particular situations, there is some evidence suggesting that US airports having MII clauses did not use them in a systematic way to prevent entry[37].

307 Other authors[38], while recognising the potential risks associated to the "US Model", also highlight the positive efficiency gains associated to it. They view the leasing agreements between airlines and airports as particular effective ways to reduce existent transaction costs. According to these authors, long term lease agreements allow airline terminal operators to protect their sunken investments

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33 *Airline Deregulation, Changes in Airfares, Service Quality, and Barriers to Entry*, Report for Congressional Requesters, General Accounting Office, March 1999. The study also recognised that other issues such as fear of predatory behaviour b the major incumbent and lack of adequate capitalization could contribute to deter airlines from beginning to fly from a particular airport.

34 Airports identified by the report has being difficult to gain access were Charlotte, Cincinnati, Detroit, Minneapolis, Newark, and Pittsburgh.

35 Airport Business Practices and their Impact on Airline Competition, FAA/OST Task Force study 1999

36 Contracts, Financing arrangements, and Public Ownership, Johannes Fuhr and Thorsten Beckers, 2007.

37 The FAA/OST Task Force study mentioned previously showed that although the MII clauses were present in 30 out of the 45 airport surveyed only in 4 airports had this clause been used.

38 *Contracts, Financing arrangements, and Public Ownership*, Johannes Fuhr and Thorsten Beckers, 2007

and to secure their route specific investments (e.g. optimising the route network). Additionally, they allow the separation of airline-specific terminals from the general asset base and in this way shelter airport and other airlines from the risks associated to these investments[39].

308 It is recognized that some airports that have adopted this model have not been particularly successful in offering good customer service (e.g. Chicago Airport[40]). The extent to which bad airport service is related to different companies owning and operating different terminals is unclear.

Airline participation in terminal management in Europe

309 In most European countries only one operator, typically state-owned, provides all, or almost all, of the passenger services within the airport. The operator faces little or no competition within the airport for most of these services, even if sometimes strong competition exists between airports[41]. As a consequence, European passenger terminals are almost always managed by airport operators.

310 However, there are already some examples in Europe where airlines participate, directly and indirectly, in the construction and operation of airport terminals. Most of these examples involve joint cooperation between airlines and airport authorities in the funding of new terminal investment. The main features of these cases are:

- An airport operator and an airline sign an agreement that involves the expansion of terminal capacity;
- this agreement allows the airline to influence the design of the new terminal in order to address its particular needs, even though the airport operator is normally responsible for building it;
- the airline will provide partial funding (directly or indirectly) for the construction of the terminal; and
- the terminal operations and ownership remain with the airport operator but are constrained by the terms of the agreement with the airlines, especially in relation to the airport charges applied.

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39 The Portland International airport provides a good example of the exposure of the airport operator and other airlines to the behaviour of a dominant airline at the airport. In 2001, Delta Airlines decided to terminate its Asian routes, which accounted for a large proportion of the airport operated terminal's traffic. One solution was for the airport to allocate the costs of spare capacity to the other carriers using the airport. However, these airlines were also subject to their competitive pressures. This airport is still struggling with a problem of excess capacity. See, *Contracts, Financing arrangements, and Public Ownership*, Johannes Fuhr and Thorsten Beckers, 2007 for more details on that story.

40 See for example the Congestion and Delay Reduction Chicago O'hare Intl Airport, 2005, FAA.

41 One exception is ground handling services, where intra-airport competition was introduced after a European directive 96/67/EC required that at least one of the handling operators in a given airport should be separated from the airport operator or from the main airline using that airport. Furthermore, it is usual for other private investors to manage smaller parts of the airport, such as retail spaces.

311 The best known example in recent years is the joint venture created by the Munich airport operator and Lufthansa to build and operate the new Terminal 2 building. In this case, a Memorandum of Understanding was signed by each party and a new company (60% owned by Munich airport and 40% by Lufthansa) was created to build and operate the terminal. In the other examples reviewed in this annex, however, it was the airport authority that carried out the construction and operation of the new terminal. For these cases, the rights and responsibilities of the airlines were set in contractual agreements.

312 The agreement with the airline is normally established before the airport terminal is built and considers the terms and conditions (namely the charges applied) of the terminal operation afterwards. The airline contribution to terminal investment can take either the form of a direct investment in the new infra-structure or of a guaranteed fixed revenue stream (e.g. the proposed expansion of the Lubeck Airport), and sometimes both (e.g. new terminal at Frankfurt Hahn).

313 Below some examples of the different frameworks developed for terminal expansions dedicated to one single airline are presented. In these cases the airline invested in terminal expansion but was not solely responsible for the ultimate operation of the terminal. As before, this list describes the cases reviewed in this report and is not, therefore, an exhaustive list.

Airport	Airline	Terminal Expansion	Airline contribution
Munich	Lufthansa	• €1500 m • 25 m pax/year	• To create Lufthansa's second largest hub • 40% of the capital
Frankfurt-Hahn Airport	Ryanair	• €25 m • 4.5m pax/year	• 12 based aircrafts • €12.5m investment in terminal • an aircraft maintenance facility
Lubeck Airport (Infratil)	Ryanair	• runway extension (failed due to court ruling against expansion)	• 2 m pax/year
Berlin Schoenefeld	easyJet	• €12.5 m	• 2.5m pax/year

Table 10: Airport-Airline agreements in Europe

Source: Vertical Governance between Airlines and Airports, Johanes Fuhr, Thorsten Beckers, Airline and airport sources

314 Recent European Commission decisions and investigations have raised some concerns over agreements that allow airlines to be involved in capacity investment planning at an airport. There are, however, some authors that consider there to be an efficiency base justification for these agreements. Below, some issues associated to this current debate are presented.

Debate on the European agreements

315 As mentioned previously, some other authors stress that vertical agreements between airlines and airports can increase market power, either by increasing competitors' relative costs in the short run or by effectively foreclosing competitors. In fact, some of the contracts between *value-based* airlines (sometimes called *low-cost* airlines) and regional airports have been put under heavy scrutiny by the European Commission. In one case, it resulted in a formal objection (Brussels South Charleroi new terminal building). The European Commission considered the agreement signed between Ryanair and the Walloon Region violated state aid laws[42]. One of the parties, Ryanair, strongly disagreed with the decision arguing that the lower airport charge agreed between the Ryanair and BSCA (and deemed anti-competitive by the European Commission) is consistent with a properly functioning market.

316 Other authors analysing the cases listed above have considered that these reduce transaction costs and are therefore efficient. According to those authors, with these long-term contracts, the airline manages to protect its route-specific investments (e.g. marketing, route optimization) and the airport manages to protect its investment in terminal capacity[43]. Admittedly, both efficiency reasons and market power reasons can justify agreements between airports and airlines and the cases would have to be judged individually.

International tenders for terminal operation

317 In both the US and in Europe, airport operators tend to negotiate directly with the interested parties, namely airlines, and bypass any open competitive tender. In these countries, public tenders are not the primary mechanism used to choose a new terminal operator. However, many economists argue that public tenders, preceded by an adequate consultation process, can be a more transparent and efficient way to deal with these kinds of choices. Examples of international tender launched to choose terminal operators are presented here. The list of cases reviewed is not exhaustive and other examples certainly exist.

318 In some countries international competitive tenders have been run for the construction, building, and operation of airport terminals. In some of these cases, international tenders are required by development banks financing the project (such as the EBRD or the World Bank). In other cases, they are seen as a particular good way of attracting private investment for infra-structures that the State is unable or unwilling to finance. Past concerns about maintenance, cost effectiveness, and adequate capacity expansion under government provision can also explain the preference for the use of concession agreements in relation to airports.

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42 Further, the European Commission is also looking into possible State aid Issues associated to other German airports.

43 See *Vertical Governance between Airlines and Airports*, Johanes Fuhr, Thorsten Beckers. Ryanair strongly disagreed with DG Comp decision arguing that the agreement made commercial sense in a well functioning market.

319 The main features of these international investment projects are:

- a public entity launches a public international tender to choose the company that will build and operate a terminal;
- although best practices exist for running a competitive tender, the particular framework will vary according to the political and economic context of the country and the objectives set by the institution running the tender;
- these international tenders and related contracts involved a degree of risk for the terminal operator, which seems primarily related to the political context associated to the country in question; and
- there is no evidence suggesting that airlines cannot participate in these tenders, although airlines have not been the winners of any of the tenders presented here.

320 The fact that these countries allow private investors (unrelated to airport operators) to operate passenger terminals seems to have been introduced out of financial necessity. It is not always the case that intra-airport competition emerges from these tenders but the tenders themselves introduce competition, even if only at an initial stage, for the right to build and operate the terminal.

321 In fact, development banks, such as the EBRD or the World Bank, see competitive tenders as good procurement practices to award concessions[44]. Tenders are viewed as transparent, accountable, cost-efficient, and competitive way to award concessions in sectors that are many times politically sensitive and that entail significant social dimensions. Therefore, these Banks require borrowers to follow the same procurement rules as the Bank itself, which amounts to say that they should apply a competitive tender whenever possible[45].

Overview of airport related international tenders

322 Accepted best practices for international tenders exist and are largely embodied in international institutions' procurement rules (such as the EBRD or the World Bank). However, the way the tender is conducted in practice will depend on the level of economic and legal development in each country. Moreover, the objectives associated to each tender may differ. Therefore, particular tenders tend to vary both in the way they are run and in their objectives.

323 In some constituencies the government organizes the tender. The Government of Albania, for example, was in charge of the tender for the construction, operation, and maintenance of the "Mother Theresa" International Airport. In

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44 See Procurement Policies and Rules, EBRD, August 2000.

45 In many cases, however, tenders fail to satisfy all the requirements set out by these Banks. In fact, a specific tender will reflect the level of institutional and economic development of the country in question and these Banks are not always in a position to enforce these rules. In these cases the tender process will still have to be considered acceptable. Moreover, small projects (less than €5m) are not required to follow a tender process. (see *EBRD Financing of Private Parties to Concessions*, EBRD, approved in May 2001)

other cases, a public independent body is used. This was the case for some of the terminal tenders in Turkey in the last years. In this country the State Aviation Authority, DHMI, was in charge of most of the passenger terminal and airport tenders. An independent body is sometimes preferred to a government institution if a strong political pressures associated to the tender exist.

324 In most cases there is an international call for tender followed by a pre-qualification stage, where bidders can be excluded if their technical and financial capabilities are deemed insufficient to run the project.

325 The criteria used for selecting the candidates in the following evaluation process vary from tender to tender and some degree of innovation is allowed. It is usual that the body in charge of running the tender sets the capacity and other requisites that the new terminal should satisfy (e.g. it should follow IATA international standards)[46]. When the bidder retains the operation of the terminal, the tender tends to take the form of an auction where the project goes to the highest bidder. When only construction is at stake, the winning bid will normally go to the lowest cost of construction. But cost and price are not the only criteria that have been used to evaluate airport related tenders. In the international tender recently launched for the Milas Bodrum terminal in Turkey potential operators were asked to provide the minimum time within which they believe they can recover their investment[47].

326 In most cases reviewed, the chosen entity is formed by several private investors organized under a project finance framework. We have not found examples of airlines being awarded the tender to build and operate for terminals in developing countries. However, we are not aware of an outright prohibition of airlines participating in these tenders. Similarly, the procurement rules of international institutions such as the EBRD do not seem to exclude airlines from participating in terminal operations.

Examples

327 Below we present some cases related to international tendering processes associated to terminal operations. This is not an exhaustive list and other tenders might exist that are not included. Although many examples exist of tenders for

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46 In some tenders bidders are allowed to present two projects – one following all the specifications in the tender and another alternative project presenting what the bidder considers to be a better model for the terminal being tendered. The international tender for the new terminal at Ferihegy Airport is one example where this option is available. The project winning the tender was an alternative project presented by the consortia ADC.

47 In the case of Albania mentioned above the respective public contracting authority specified the desired capacity and let the private concessionaire introduce innovative variations in their bids subject to the capacity requirement. For example, the German consortia (led by Hochtief AirPort) that won the Tirana Airport concession decided that it would be better to build the international passenger terminal in two phases to ensure there was enough passenger traffic to justify a bigger terminal, but they did the engineering to allow a "smooth" addition of physical capacity, which has indeed materialised.

the construction and operation of airports (and not only a terminal) these are not included in this table[48].

Tender	Capacity (pax/year)	Terminal operator	Lease	Year	Country
Rehabilitate old terminal + New terminal Prague Intl. Airport	4.8m	PIADC (Bouygues and Schipol)	BOT 25 years	1995	Czech Republic
New terminal Budapest Ferihegy Airport	5m	ADC (Aeroport de Montreal International)	BOT 12 years after construction	1994	Hungary
New intl. terminal 1 Antalya Airport	12m	Bayindir (now Fraport)	BOT 10 years	1996	Turkey
New intl. terminal 2 Antalya Airport	10m	Celebi	BOT 4.5 years	2003	Turkey
New terminal Ankara Esenboga	10m	TAV	BOT 15 years after construction	2004	Turkey
New terminal Istanbul Ataturk Airport	14m	TAV	BOT 4+ 15 years after construction	1997	Turkey
New Intl. terminal Ninoy Aquino Airport	13m	PIATC (Philippines International Air Terminals Co.)	BOT 25 years	1999	Philippines
New terminal + rehabilitate old terminal Carrier del Sur Airport	n.a.	Aerosur	Construction and operation 16 year	1999	Chile
Rehabilitate old terminal Cerro Moreno Airport	n.a.	CINTRA (Ferrovial)	Rehabilitate, operate, transfer 10 years	1999	Chile
New terminal El Tepual	n.a.	Tepual	Construction and operation 12 years	1995	Chile

Table 11: Competitive tenders for terminal construction and operation

Source: Various sources.

48 According to an article of the PPIAF (World Bank), the private sector has played a growing role in both developed and developing countries. According to the article, between 1990 and 2005, 38 low and middle income countries entered into more than 100 airport contracts with private sectors. Moreover, concessions have remained the most common form of private participation in developing countries. See *The Growing and Evolving Business of Private Participation in Airports*, Doug Andrew and Silviu Dochia, PPIAF (World Bank), September 2006.

Annexe 1: Evidence on feasibility of proposal

Debate on international airport and terminal tenders

328 Not all tender processes were smooth and terminal operators are sometimes exposed to considerable political risk. The Ferihegy Airport terminal expansion in Budapest, for example, has been problematic. Three years after beginning to operate the terminal it constructed, the consortium that won the international tender for expanding terminal facilities saw this right expropriated by the Hungarian Government. Unable to reach an agreement on the level of compensation, the case was eventually decided by the Centre for Settlement of Investment Disputes five years later. The consortium was awarded c. USD82 million to be paid by the Hungarian government[49].

329 However these cases seem to be more the exception rather than the rule. Most tenders are completed successfully and the contract is respected by both parties. In fact, this allocation method continues to be preferred by international institutions and several governments around the world.

49 See ADC Affiliated Limited and ADC & ADCMC Management Limited v. The Republic of Hungary, ICSID Case No ARB/03/16, October 2006.

Annexe 1: Evidence on feasibility of proposal

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