



POLICY ROUNDTABLES

Competition Policy and International Airport Services 1997

Introduction

The OECD Competition Committee debated competition policy and international airport services in June 1997. This document includes an executive summary, an analytical note by the OECD staff and written submissions from Australia, Austria, Canada, the European Commission, Germany, Hungary, Italy, Japan, Korea, Norway, Poland, Sweden, Switzerland, the United Kingdom, the United States and BIAC, as well as an aide-memoire of the discussion.

Overview

Although airlines have long sought to enter alliances, an important new development in the last decade has been the crystallization of international airline alliances around major airline groupings. The scope and nature of these alliances differ, but there is a tendency towards deeper alliances involving co-operation on all aspects of the airline business. These super-alliances are coming as close to actual mergers as aviation's Byzantine regulations allow, raising fundamental questions for competition policy-makers and enforcers.

Alliances have the potential both to enhance the level and quality of services offered to consumers and to significantly restrict competition. Why do airlines seek to enter such alliances? What are the benefits to the airlines or consumers? How do alliances restrict competition? What is the role played by frequent-flyer programmes and other loyalty schemes? What remedies should competition authorities consider to alleviate the harmful effects of alliances? What is the appropriate role for international co-operation between authorities?

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FOREWORD

This document comprises proceedings in the original languages of a Roundtable on Competition Issues in the Allocation of Airport Take-Off, Landing Slots and Ground Handling Services which was held by the Working Party n°2 of the Committee on Competition Law and Policy in June 1997.

This compilation which is one of several published in a series named "Competition Policy Roundtables" is issued to bring information on this topic to the attention of a wider audience.

PRÉFACE

Ce document rassemble la documentation dans la langue d'origine dans laquelle elle a été soumise, relative à une table ronde sur les problèmes de concurrence dans l'attribution des créneaux horaires de décollage et d'atterrissage et concernant les services au sol aéroportuaires. Cette table ronde s'est tenue en juin 1997 dans le cadre du Groupe de travail n° 2 du Comité du droit et de la politique de la concurrence.

Cette compilation qui fait partie de la série intitulée "les tables rondes sur la politique de la concurrence" est diffusée pour porter à la connaissance d'un large public, les éléments d'information qui ont été réunis à cette occasion.

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EXECUTIVE SUMMARY

Looking back over the discussion and the country submissions, the following points emerge:

- *Regulatory concern over airports (and therefore of slots) stems from a lack of inter-airport competition at many major cities. Restrictions on inter-airport competition should be eliminated.*

The provision of air services between any two given cities requires two complementary inputs in fixed proportions - aircraft services (flights) and airport services (including take-offs, landings and ground-handling services). As a result, if there is to be effective competition (in the absence of government intervention) in the market for air transport services, there must be adequate competition in *both* of these markets.¹

For example, if there is limited competition between airlines, enhancing competition between airports (or regulatory controls on airport market power) alone will not reduce the prices faced by consumers, as the market power that was previously exercised by the airports will simply be transferred to the airlines. Similarly, if there is limited competition between airports (and no other regulatory controls), enhancing competition between airlines alone will not reduce the prices faced by consumers, as the market power previously exercised by the airlines will be transferred to the airports.

Therefore, a first step in the promotion of competition in air transport is the promotion, as far as possible, of inter-airport competition. In particular, restrictions on the establishment of new and/or privately-owned airports should be eliminated. Where there are two or more airports serving the same city, they should not be under the same private ownership or control.

However, there are certain economies of scale in the provision of airports. Relatively few cities are served by two or more airports. In general, inter-airport competition is relatively limited. Partly as a result, partly for historical reasons, airports around the world are subject to significant state intervention, both in the form of regulation and in the form of state ownership.

- *A profit-maximising, independent airport has strong incentives to allocate take-off and landing rights and to invest in new capacity efficiently.*

A profit-maximising airport has strong incentives to take whatever actions are necessary to ensure that it is able to extract the maximum revenue possible from each take-off and landing. As is well-known, this involves charging according to the demand elasticity of the service for which the take-off or landing will be used. This would certainly involve charging more for the right to take-off or land at peak times. It may further involve careful price discrimination between different carriers operating different aircraft or different routes.² It may also involve holding auctions to ensure that the rights are allocated to those airlines which value them most highly.

When a particular collection of take-off and landing rights is more valuable than individual rights on their own, the airport can package these together and sell them as a bundle which is called a "slot" (the equivalent of the "season ticket" in football). If the airport determines that

airlines value the certainty that comes from holding such a right indefinitely (due to the need to make investment in a particular route) the airport could offer the right in perpetuity (an “infinitely-lived” slot). Otherwise, where airlines value the flexibility of being able to change their routes without the potential liability of having to find a buyer for a slot, the airport could offer slot “leases”. If the presence of a secondary market will make the slots more valuable to the airlines (as it offers them liquidity), the airport can facilitate the establishment of that market. However, the presence of a secondary market may make price-discrimination more difficult. Indeed, it might be efficient, in such circumstances, for the airport to seek to suppress, as much as possible, subsequent trades between airlines.

In any case, the airport will face the right incentives to set the charges for the take-off and landing rights and the associated institutional arrangements efficiently.

In addition, of course, the airport (and other entrepreneurs), being able to observe the marginal value of an extra take-off or landing right will have strong incentives to invest in new capacity (in the form of new runways, new buildings, improved air-traffic control services, or an entirely new airport) at the appropriate time.

Lastly, and importantly, this result remains true even if the airport has market power, provided the airport can charge, for example, through a system of two-part charges. If the airport can use two-part charges, it can maintain the “variable” component low to encourage airlines to make use of its services, while extracting any available monopoly rent through the “fixed” component of the charges.

- *Regulatory concern over the allocation of slots or investment in new capacity only arises because of either (i) weak, or imperfect incentives on airports as a result of imperfect regulation or state ownership or (ii) vertical relationships between airports and airlines.*

It is clear that where there is a vertical relationship between an airport and an airline, and the airport is price regulated, the airline may have strong incentives to attempt to exclude other air carriers from access to the airport, which may need to be addressed through regulatory controls (such as the “essential facilities” doctrine).

However, regulatory concerns over slot allocation also arise at a number of airports where there is no vertical relationship with airlines. A profit-maximising airport has efficient incentives to allocate slots and expand capacity efficiently. In this case there would be no regulatory concern over the allocation of slots. However existing airport regulation distorts the incentives on airports to allocate slots efficiently, perhaps by limiting the incentives on the airport to engage in profit-maximising behaviour.³ Regulatory concern over slots is a response to the *failure* of other forms of regulation.

In particular, regulatory intervention in the allocation of slots may:

- make more transparent the number of available slots and the use of those slots, in order to make it more difficult for incumbent airlines to prevent access by new airlines (on the basis of lack of capacity); and
- encourage, through administrative means, an allocation of slots which might have arisen if airports had appropriate incentives to price discriminate efficiently between flights.

- *Where there is adequate inter-airport competition, regulatory controls on airports should be removed so that airports face appropriate economic incentives. Where it is not possible to rely on inter-airport competition, vertical relationships between airports and airlines should be avoided; regulation on airports should be improved so that airports face efficient incentives in the setting of charges and in rationing access to take-off and landing rights.*

Where there is adequate inter-airport competition, we need not be concerned about airport charges or vertical relationships between airports and airlines. Airports should be given the incentive (through, say, privatisation, franchising or long-term leasing) and the ability (through removal of regulatory controls) to set efficient charges.

Where there is not adequate inter-airport competition (as seems likely) the situation is more difficult. Although there are certain economies of scope in the joint operation of airports and airlines, these seem to relate primarily to the provision of ground services. This can be addressed by permitting airlines to provide certain ground facilities and services themselves. There is a certain amount of co-specialisation between airports and planes (for example, investment in sophisticated landing systems), but such systems are typically standardised at the international level. As a result, the costs of separating the airport infrastructure from aircraft operators are relatively small. On the other hand, such separation greatly simplifies the regulatory issues associated with airports. Therefore, vertical relationships should be avoided.

Although, where there is inadequate inter-airport competition, airports will need some form of regulatory controls, such controls need not interfere with the incentives of the airports to set efficient take-off and landing charges, etc. For example, the regulatory controls might fix a ceiling on a basket of charges, but allow the airport operator flexibility within the overall basket (i.e., “price-cap” regulation).

- *Where, for whatever reason, it is not possible to establish efficient incentives on airports, the slot allocation process should be regulated. Slots should be allocated using market processes, in both the primary and secondary markets, subject to competition law.*

In some circumstances, it may not be possible (at least in the short-term) to establish efficient incentive arrangements on airports. In this case, as a second-best, it may be preferable to regulate the slot allocation process directly.

In general, market allocation processes are preferred over administrative allocation processes. Slots should be allocated to those who value them most highly (subject to the usual controls over concentration found in competition law). This outcome is more likely to be achieved through market processes than through administrative allocation. Although establishing a secondary market in slots would make price-discrimination by the airport operator more difficult, in a circumstance where the airport operator either cannot price-discriminate or does not face incentives to do so efficiently, this is not a primary concern. All slots should be able to be traded in the market, including those held by new entrants, regional carriers and international operators.

In particular, requirements that slots can only be swapped, without associated cash payments, should be abolished. As the UK submission notes “bans on the buying and selling of slots is ... an extremely clumsy and inefficient means of obtaining the objective [of preventing the expansion of dominant airlines]... whilst they prevent a dominant airline expanding it also limits the potential for successful and low cost airlines which are not dominant from increasing their market share.”

In principle, the establishment of a secondary market in slots is sufficient for efficiency. Even if the slots are given away for free in some initial allocation, provided transactions costs are low enough, an efficient outcome will still result. Giving away the slots for free does provide a windfall gain to the recipient airlines but does not result in a subsequent competitive advantage.

Where there is no secondary market (for example, where inter-airline trades are not allowed), the primary market is particularly important. In particular, certain numbers of slots should not be put aside for certain categories of operators (such as “positive discrimination” schemes favouring new entrants or regional airlines). Doing so increases the probability that slots will be used by less efficient airlines.

Anti-competitive concentrations of slots should be prevented in the same manner as anti-competitive concentrations of any other business assets. Establishing a market for slots will not necessarily erode any existing dominance. Network effects are strong in the airline industry, making small-scale entry difficult. Barriers to entry may remain high and a dominant position may persist indefinitely. Concerns over this persistence of dominance do not merit additional intervention in the slot market (over and above normal competition law restraints). Instead, regulatory action should seek to reduce the barriers to entry by removing obstacles to airport expansion, or the establishment of new airports.

- *The hoarding problem, which is exacerbated by existing regulatory arrangements, should be controlled through competition law. Slot rights should probably be infinitely lived. The use-it-or-lose-it rule here, as in other sectors, produces inefficient outcomes.*

Present arrangements may exacerbate the hoarding problem. The market price for a slot represents its value to the next-best user of a slot. This is the opportunity cost to society of an airline holding a slot. Where there is no primary and/or secondary market for slots airlines do not face this opportunity cost. As a result, they may choose to hold slots even when doing so is socially inefficient. In other words, present arrangements, which in many countries restrict the existence of the secondary market, may exacerbate the problem of hoarding (which is then addressed through other regulatory controls, such as the use-it-or-lost-it rule).

The introduction of a market for slots will not, however, completely eliminate the hoarding problem. As the UK submission notes: “There is no incentive to hoard slots under a perfectly competitive market system where the price reflects the expected present and future value of the asset. However, if the market for slots is not perfectly competitive, e.g. because the initial allocation of slots creates a dominant airline at a congested airport, airlines may well prefer to use their slot on a low profit route rather than risk selling to a rival who could then enter on the airline’s most profitable routes. ... Although a market based system may not entirely eliminate hoarding one of its principal benefits is that it greatly reduces the incentive to under-utilise slots which it does by increasing the opportunity cost of airlines using slots in an inefficient manner. ‘Hoarding’ can also be nearly eliminated in a market based system if dominant airlines are able to place covenants on the sale of slots (or lease or franchise them) so that they do not fall into the hands of rivals who might engage in head-to-head competition.”

Airlines make substantial specific-investments in their timetables. Inevitably, when a slot has a finite life, the incentives to invest in that slot will diminish as the end of the slot life approaches. This problem can be overcome by making slot rights infinitely-lived. The terms and conditions

of these slot rights will need to clearly specify rights in the event of say, closure of the airport, but these problems are not insurmountable.

Under the use-it-or-lose-it rule, an airline must use a slot, or it returns to the issuer. Clearly, depending upon the costs and difficulties of collecting together all of the inputs necessary to operate a successful airline, there may be times when an airline may seek to acquire slots without immediately using them (for example, the airline may be a new entrant seeking to acquire a “viable bundle” of slots before commencing operations). To force such an airline to “use” the slots gives rise to various inefficient forms of behaviour (such as retaining unprofitable routes simply to continue to keep the slot utilisation up). Provided the airline faces the full opportunity costs of holding slots (as discussed above) it should not be prevented from acquiring slots before using them.

- *In the case of services provided at airports (ground handling services and other commercial operations), airports should be required to introduce competition as far as that is possible. To the extent that it is not possible, airport price regulation should control the prices charged by these complementary services.*

Of course, where there is inadequate inter-airport competition, the market power of airports extends, not just to take-offs and landings, but also to any other complementary services for which there are no suitable substitutes. In particular there are two important categories of services for which competition may be limited - ground-handling services (including passenger handling, baggage handling, flight catering and aircraft maintenance) and airport retail services (including retail shops, restaurants and services such as car rentals, taxis, etc.).

In each case, the airport operator (depending on the ownership/regulatory arrangements) may have strong incentive to exploit its market power by limiting competition and extracting rents, with regard to these services.

Although it is, in principle, possible to control the prices charged by the airport for these services, in general it is better to foster competition wherever possible. Therefore, as a first choice, it is desirable to encourage the airport operator to allow as much competition as space will allow (and, indeed to expand capacity to allow further competition in some circumstances). In other words, airports should be encouraged to introduce several competing ground handling operators, airport restaurants, airport retailers, airport car rental agencies, and so on. In some cases, it may be possible to force this through application of a form of the “essential facilities” doctrine.

In some cases, airports restrict competition even when there is no clear space constraint. For example, a number of airports limit the number of taxis that serve the airport (perhaps by only licensing a certain number to operate at the airport or, equivalently, by charging a fee for the right to serve the airport). From a competition point of view, such practices are a pure exercise of market power and are therefore indefensible.

Where true space constraints limit the number of providers of a particular service at the airport, it may be necessary to directly regulate the airport’s charges for that service. This can be achieved by, for example, including the prices for the service within the basket of prices that are capped. In other words, the “price-cap” should cover both “aeronautical” services (take-off and landing charges, ground-handling charges) and other “retail” services (concessions, parking, taxis, etc.)

NOTES

- 1 Of course, competition from other transport modes can be an important and effective discipline and should be encouraged. For the purposes of this note, we will put this issue to one side. In addition, and importantly, for certain classes of passengers, different cities may be adequate substitutes for each other. For these passengers the relevant market to consider is the set of all the airports serving all of the potential origin or destination cities. These passengers are likely to be protected, to a greater degree, from restrictions on competition in air services at a particular city.
- 2 For example, take-off or landing rights could be divided according to which route they are allowed to serve (as occurs in Japan). Provided the airline can prevent a take-off or landing right intended for one route from being used to serve another route, this device would allow the airport to charge different prices according to the route that the slot is serving.
- 3 For example, through state-ownership or through regulations, such as those in the US, which require airports to reinvest all revenues raised within the airport itself.

SYNTHESE

De la discussion qui précède et des documents soumis par les pays se dégagent les grandes lignes ci-après :

- *Les préoccupations d'ordre réglementaire concernant les aéroports (et, par conséquent, les créneaux) tiennent à l'absence de concurrence entre les aéroports dans de nombreuses grandes villes. Il faudrait lever les restrictions à la concurrence entre aéroports.*

La fourniture de services aériens entre deux villes données nécessite deux apports complémentaires dans des proportions fixes -- les services de transport (vols) et les services aéroportuaires (notamment les décollages, les atterrissages et les services d'escale). De ce fait, si l'on veut une concurrence efficace (en l'absence d'intervention gouvernementale) sur le marché des services de transport aérien, il doit y avoir une concurrence suffisante sur ces *deux* marchés¹.

Par exemple, s'il y a une concurrence limitée entre les compagnies aériennes, le renforcement de la concurrence entre les aéroports (ou les contrôles réglementaires sur le pouvoir de marché des aéroports) ne suffira pas à réduire les prix pour les utilisateurs car le pouvoir de marché exercé auparavant par les aéroports sera simplement transféré aux compagnies aériennes. De même, s'il y a une concurrence limitée entre les aéroports (et pas d'autres contrôles réglementaires), l'intensification de la concurrence entre les compagnies aériennes ne suffira pas à réduire les prix pour les utilisateurs, car le pouvoir de marché exercé auparavant par les compagnies aériennes sera transféré aux aéroports.

Par conséquent, une première mesure décisive à prendre pour stimuler la concurrence dans le transport aérien est de renforcer, autant que possible, la concurrence entre aéroports. En particulier, il faut éliminer les restrictions à l'établissement de nouveaux aéroports et/ou d'aéroports privés. Lorsqu'il y a plusieurs aéroports qui desservent la même ville, il ne doivent pas être placés sous le même contrôle financier et réglementaire.

Il y a toutefois certaines économies d'échelle dans la fourniture d'aéroports. Il y a relativement peu de villes qui sont desservies par plusieurs aéroports. En général, la concurrence entre aéroports est assez limitée. En partie à cause de cela et en partie pour des raisons historiques, les aéroports sont soumis à une intervention notable de l'Etat, à la fois sous forme de réglementation et sous forme de participations au capital.

- *Un aéroport indépendant qui cherche à maximiser ses bénéfices est fortement incité à attribuer des droits de décollage et d'atterrissage et à investir dans de nouvelles capacités de manière efficiente.*

Un aéroport qui cherche à maximiser ses bénéfices, est fortement incité à prendre toutes mesures nécessaires pour pouvoir tirer le maximum d'argent de chaque décollage et chaque atterrissage. Pour cela, c'est bien connu, il fera payer une redevance fixée en fonction de l'élasticité de la demande du service pour lequel le décollage ou l'atterrissage sera utilisé. La redevance sera certainement plus élevée pour le décollage et l'atterrissage aux périodes de pointe. L'aéroport peut aussi opérer une soigneuse discrimination par les prix entre différents transporteurs

exploitant différents avions ou différentes lignes². Il peut aussi procéder à des adjudications de façon que les droits soient attribués aux compagnies aériennes qui les valorisent le plus.

Lorsqu'un ensemble particulier de droits de décollage et d'atterrissage a plus de valeur que les différents droits considérés isolément, l'aéroport peut les regrouper et les vendre en paquet que l'on peut appeler un "créneau" (l'équivalent d'un "abonnement" au football). Si l'aéroport estime que les compagnies attachent de l'importance à la certitude que procure la détention d'un droit pour une durée indéfinie (en raison de la nécessité d'investir sur une ligne particulière), il peut offrir le droit à perpétuité (un créneau à "durée indéterminée"). Autrement, lorsque les compagnies aériennes apprécient la souplesse qu'offre la possibilité de changer de lignes sans avoir à trouver un acheteur pour un créneau, l'aéroport peut "louer" les créneaux. Si l'existence d'un marché secondaire rend les créneaux plus intéressants pour les compagnies aériennes (du fait que cela leur donne de la liquidité), l'aéroport peut faciliter la création de ce marché. Toutefois, l'existence d'un marché secondaire peut, de fait, rendre plus difficile une discrimination par les prix. En fait, dans ces cas-là, il serait peut-être judicieux pour l'aéroport de chercher à supprimer, autant que possible, les échanges ultérieurs entre compagnies.

En tout cas, l'aéroport sera incité à fixer les redevances de décollage et d'atterrissage et les arrangements institutionnels correspondants de manière efficiente.

En outre, bien entendu, l'aéroport (et les autres entreprises), étant en mesure de percevoir la valeur marginale d'un droit supplémentaire de décollage ou d'atterrissage, sera fortement incité à investir dans de nouvelles capacités (sous forme de nouvelles pistes, de nouveaux bâtiments, de services améliorés de contrôle de la circulation aérienne ou d'un aéroport entièrement neuf) au moment opportun.

Enfin, et cet aspect est important, cela reste vrai même si l'aéroport a un pouvoir de marché, à condition qu'il puisse appliquer, par exemple, un système de redevances en deux parties. Si l'aéroport peut appliquer ces redevances en deux parties, il peut maintenir la composante "variable" à un niveau peu élevé afin d'encourager les compagnies aériennes à utiliser ses services, tout en tirant une éventuelle rente de monopole par le biais de la composante "fixe" des redevances.

- *L'attribution de créneaux ou l'investissement dans des capacités nouvelles ne suscite de préoccupations réglementaires que (i) parce que les incitations offertes aux aéroports sont insuffisantes ou imparfaites en raison de l'imperfection de la réglementation ou du contrôle financier de l'Etat ou (ii) parce qu'il existe des relations verticales entre les aéroports et les compagnies aériennes.*

Il est évident que lorsqu'il existe une relation verticale entre un aéroport et une compagnie aérienne, et que les prix de l'aéroport sont réglementés, la compagnie aérienne peut être fortement incitée à tenter d'exclure les autres transporteurs de l'accès à l'aéroport, situation qui peut nécessiter le recours à des contrôles réglementaires (tels que la doctrine des "facilités essentielles").

Toutefois, des préoccupations d'ordre réglementaire concernant l'attribution des créneaux existent aussi pour un certain nombre d'aéroports où il n'y a pas de relations verticales avec des compagnies aériennes. Un aéroport qui cherche à maximiser ses bénéfices est incité à attribuer les créneaux et à accroître ses capacités de manière efficiente. Dans ce cas, il n'y aurait pas de problème réglementaire pour l'attribution des créneaux. Cependant, la réglementation

aéroportuaire existante fausse les incitations à attribuer les créneaux de manière efficiente, peut-être en limitant les incitations qui poussent l'aéroport à adopter un comportement de maximisation des bénéfices³. Le problème de réglementation concernant les créneaux résulte de la *défaillance* des autres formes de réglementation.

En particulier, l'intervention réglementaire dans l'attribution des créneaux peut :

- rendre plus transparent le nombre de créneaux disponibles et l'utilisation de ces créneaux, de sorte qu'il sera plus difficile aux compagnies aériennes en place d'empêcher l'accès de nouvelles compagnies (en arguant du manque de capacité) ; et
 - encourager, par des moyens administratifs, une attribution de créneaux qui aurait pu se faire si l'aéroport était suffisamment incité à opérer une discrimination efficiente par les prix entre les vols.
- *Lorsqu'il y a une concurrence suffisante entre aéroports, il convient de supprimer les contrôles réglementaires sur les aéroports de façon que ces derniers soient soumis à des incitations économiques appropriées. Lorsqu'il n'est pas possible de compter sur la concurrence entre aéroports, il faut éviter les relations verticales entre aéroports et compagnies aériennes ; il convient d'améliorer la réglementation appliquée aux aéroports afin qu'ils aient des incitations efficaces en matière de détermination des redevances et de répartition de l'accès aux droits de décollage et d'atterrissage.*

Lorsqu'il y a une concurrence suffisante entre aéroports, il n'y a pas à se préoccuper des redevances d'aéroport ou des relations verticales entre aéroports et compagnies aériennes. Il faut donner aux aéroports des incitations (par voie de privatisation, de franchisage ou de location à long terme, par exemple) et la possibilité (par la suppression des contrôles réglementaires) de fixer les redevances de manière efficiente.

Lorsque la concurrence entre aéroports est insuffisante (comme cela semble probable), la situation est plus difficile. Bien que l'exploitation conjointe d'aéroports et de compagnies aériennes permette certaines économies d'échelle, ces dernières semblent liées principalement à la fourniture de services au sol. On peut résoudre cette question en autorisant les compagnies aériennes à fournir elles-mêmes certaines facilités et certains services au sol. Il existe une certaine co-spécialisation entre les aéroports et les avions (par exemple, l'investissement dans des systèmes d'atterrissage très perfectionnés), mais ces systèmes sont généralement standardisés au niveau international. Par conséquent, les coûts de séparation de l'infrastructure aéroportuaire des exploitants d'avions sont relativement faibles. En revanche, cette séparation simplifie grandement les problèmes réglementaires concernant les aéroports. Il faut donc éviter les relations verticales.

Même si, en cas de concurrence insuffisante entre aéroports, ces derniers ont besoin d'une certaine forme de contrôles réglementaires, ces contrôles n'ont pas à interférer avec les incitations qui doivent amener les aéroports à fixer de manière efficiente les redevances de décollage et d'atterrissage etc. Par exemple, les contrôles réglementaires pourraient plafonner un panier de redevances, mais laisser à l'exploitant de l'aéroport une certaine flexibilité à l'intérieur du panier global (réglementation par le "plafonnement des prix").

- *Lorsque, pour une raison quelconque, il n'est pas possible d'offrir des incitations efficaces aux aéroports, la procédure d'attribution des créneaux doit être réglementée. Les créneaux doivent être attribués suivant les mécanismes du marché, sur le marché primaire comme sur le marché secondaire, conformément au droit de la concurrence.*

Dans certains cas, il arrive qu'il ne soit pas possible (du moins dans le court terme) d'établir des systèmes d'incitation efficaces pour les aéroports. Dans ce cas, comme solution de pis-aller, il est peut-être préférable de réglementer directement la procédure d'attribution des créneaux.

En général, on préfère les procédures d'attribution par le marché aux procédures d'attribution administrative. Les créneaux doivent être attribués à ceux qui les valorisent le plus (sous réserve des contrôles habituels en matière de concentration qui sont prévus par le droit de la concurrence). Les chances d'obtenir ce résultat sont plus grandes avec les procédures d'attribution par le marché qu'avec les procédures d'attribution administrative. Bien qu'avec un marché secondaire des créneaux il soit plus difficile à l'exploitant d'aéroport d'opérer une discrimination par les prix, s'il arrive que l'exploitant d'aéroport ne puisse pas opérer de discrimination par les prix ne soit pas incité à le faire de manière efficace, cela ne pose pas de problème majeur. Tous les créneaux doivent pouvoir s'échanger sur le marché, y compris ceux des nouveaux arrivants, des transporteurs régionaux et des exploitants internationaux.

En particulier, il faut supprimer les dispositions qui prévoient que les créneaux peuvent seulement être troqués, sans paiements correspondants. Comme il est indiqué dans la contribution du Royaume-Uni, les interdictions d'achat ou de vente de créneaux sont un moyen extrêmement peu commode et inefficace d'atteindre l'objectif (à savoir empêcher l'expansion des compagnies aériennes dominantes) et cela empêche les compagnies non dominantes qui marchent bien et qui coûtent peu cher d'accroître leur part de marché.

En principe, la création d'un marché secondaire des créneaux suffit à l'efficience. Même si les créneaux sont donnés gratuitement lors d'une attribution initiale, pourvu que les coûts de transaction soient assez bas, le résultat sera satisfaisant. Le fait de donner les créneaux gratuitement représente bien un avantage inespéré pour les compagnies bénéficiaires, mais cela ne leur confère pas, par la suite, d'avantage concurrentiel.

Lorsqu'il n'existe pas de marché secondaire (par exemple, lorsque les échanges entre compagnies aériennes ne sont pas autorisés), le marché primaire est particulièrement important. En particulier, certaines quantités de créneaux ne doivent pas être réservées à certaines catégories d'opérateurs (comme les systèmes de "discrimination positive" qui favorisent les nouveaux entrants ou les compagnies régionales). Cela accroîtrait les risques de voir les créneaux utilisés par des compagnies aériennes moins efficaces.

Il faut éviter les concentrations anticoncurrentielles de créneaux de la même manière que les concentrations anticoncurrentielles d'autres actifs des entreprises. La création d'un marché des créneaux ne réduira pas forcément une dominance existante. Les effets de réseau sont puissants dans le secteur du transport aérien, ce qui rend difficile l'entrée de petites compagnies. Les obstacles à l'entrée peuvent rester élevés et une position dominante peut persister indéfiniment. Les préoccupations au sujet de cette persistance ne justifient pas une intervention additionnelle sur le marché des créneaux (en sus et en deçà des restrictions habituelles de la législation de la concurrence). Il faut plutôt chercher à prendre des mesures réglementaires afin de réduire les barrières à l'entrée en éliminant les obstacles à l'expansion des aéroports ou à la création de nouveaux aéroports.

- *Le problème de la rétention de créneaux, aggravé par les réglementations existantes, doit être réglé par le droit de la concurrence. Les droits à créneaux doivent probablement être accordés pour une durée illimitée. La règle de péremption des droits inutilisés, dans ce secteur comme dans les autres, donne des résultats peu satisfaisants.*

Les arrangements actuels peuvent aggraver le problème de la rétention. Le prix du marché pour un créneau représente sa valeur pour le deuxième meilleur utilisateur. C'est le coût d'opportunité que représente pour la société la détention d'un créneau par une compagnie aérienne. Lorsqu'il n'y a pas de marché primaire et/ou secondaire des créneaux, les compagnies n'ont pas à supporter ce coût d'opportunité. De ce fait, elles peuvent choisir de conserver les créneaux même si cela est inefficace pour la société. En d'autres termes, les arrangements actuels, qui dans de nombreux pays restreignent l'existence du marché secondaire, peuvent aggraver le problème de la rétention (qui est alors résolu à l'aide d'autres contrôles réglementaires, tels que la règle de péremption des droits inutilisés).

La création d'un marché des créneaux n'éliminera cependant pas totalement le problème de la rétention. Comme il est indiqué dans la contribution du Royaume-Uni, il n'y a pas d'incitation à conserver les créneaux dans un système de marché parfaitement concurrentiel où le prix reflète la valeur présente et future attendue de l'actif. Toutefois, si le marché des créneaux n'est pas parfaitement concurrentiel, par exemple parce que l'attribution initiale des créneaux confère à une compagnie aérienne une position dominante sur un aéroport encombré, les compagnies peuvent fort bien préférer utiliser leur créneau sur une ligne peu rentable plutôt que de risquer de le vendre à une concurrente qui pourrait alors entrer sur leurs lignes les plus rentables. Même si un système régi par les lois du marché ne supprime pas entièrement la rétention, l'un de ses principaux avantages est de réduire grandement l'incitation à sous-utiliser les créneaux, ce qu'il fait en augmentant le coût d'opportunité de l'utilisation inefficace des créneaux par les compagnies aériennes. La rétention peut aussi être pratiquement éliminée dans un système régi par les lois du marché si les compagnies dominantes sont en mesure d'imposer des clauses spéciales lors de la vente des créneaux (ou de les louer ou de les franchiser) de façon qu'ils ne tombent pas aux mains de concurrentes qui pourraient se lancer dans une concurrence directe.

Les compagnies aériennes réalisent d'importants investissements dans les créneaux. Inévitablement, lorsqu'un créneau a une durée limitée, les incitations à investir dans ce créneau diminuent à mesure que la fin de la période approche. Ce problème peut être résolu si l'on accorde les créneaux pour une durée indéfinie. Les conditions d'attribution de ces créneaux doivent clairement préciser les droits en cas de fermeture de l'aéroport, par exemple, mais ces problèmes ne sont pas insurmontables.

Selon la règle de péremption des droits inutilisés, une compagnie aérienne est obligée d'utiliser un créneau, faute de quoi ce créneau retourne à celui qui l'a attribué. De toute évidence, en fonction des coûts et des difficultés d'obtention de tous les éléments nécessaires à l'exploitation rentable d'une compagnie aérienne, il peut arriver qu'une compagnie cherche à acquérir des créneaux sans les utiliser immédiatement (par exemple, la compagnie peut être nouvelle sur le marché et chercher à acquérir un "paquet viable" de créneaux avant de commencer ses activités). L'obligation faite à cette compagnie d'"utiliser" les créneaux peut donner lieu à diverses formes inefficaces de comportement (telles que le maintien de lignes non rentables dans le seul but de continuer d'utiliser le créneau). Pourvu que la compagnie supporte intégralement les coûts d'opportunité de la détention des créneaux (comme on l'a vu plus haut), elle ne doit pas être empêchée d'acquérir des créneaux qu'elle n'utilisera pas immédiatement.

- *En ce qui concerne les services fournis dans les aéroports (services d'escale et autres activités commerciales), il faut obliger les aéroports à faire jouer la concurrence autant que possible. Dans la mesure où cela n'est pas possible, la réglementation des prix des aéroports doit permettre de contrôler les prix de ces services complémentaires.*

Bien entendu, lorsque la concurrence entre aéroports est insuffisante, le pouvoir de marché des aéroports s'étend non seulement aux décollages et atterrissages mais aussi aux autres services complémentaires pour lesquels il n'y a pas de substituts appropriés. En particulier, il existe deux catégories importantes de services pour lesquels la concurrence peut être limitée -- les services d'escale (y compris l'assistance aux passagers, la manutention des bagages, la restauration et la maintenance des avions) et les services de commerce de détail dans les aéroports (boutiques, restaurants, location de voitures, taxis etc.).

Dans chaque cas, l'exploitant d'aéroport (selon le régime de propriété/ les arrangements réglementaires) peut être fortement incité à exploiter son pouvoir de marché en limitant la concurrence et en tirant des rentes de ces services.

Bien qu'il soit, en principe, possible de contrôler les prix pratiqués par l'aéroport pour ces services, il vaut mieux, en général, favoriser la concurrence chaque fois que possible. Il est donc souhaitable, en premier choix, d'encourager l'exploitant de l'aéroport à autoriser autant de concurrence que l'espace disponible le permet (et, de fait, à étendre ses capacités afin de permettre une plus grande concurrence dans certains cas). En d'autres termes, il faut encourager les aéroports à faire entrer plusieurs fournisseurs concurrents de services d'escale, plusieurs restaurants, commerçants et agences de location de voitures etc. Dans certains cas, il est peut-être possible de les y forcer en appliquant une forme de la doctrine des "facilités essentielles".

Dans certains cas, les aéroports restreignent la concurrence même lorsqu'il n'y a pas de manque d'espace évident. Par exemple, un certain nombre d'aéroports limitent le nombre de taxis qui les desservent (peut-être en ne délivrant qu'un certain nombre de licences à cet effet ou, ce qui revient au même, en faisant payer une redevance pour le droit de desservir l'aéroport). D'un point de vue concurrentiel, ces pratiques sont un pur exercice du pouvoir de marché et sont donc inadmissibles.

Lorsque de réelles contraintes de capacités limitent le nombre de fournisseurs d'un service particulier à l'aéroport, il peut être nécessaire de réglementer directement les redevances que les aéroports font payer pour ce service. On peut le faire, par exemple, en incluant les prix du service dans le panier de prix plafonnés. En d'autres termes, le "plafonnement des prix" doit couvrir à la fois les services "aéronautiques" (redevances de décollage et d'atterrissage, redevances pour services d'escale) et les autres services "commerciaux" (concessions, parking, taxis etc.).

NOTES

- 1 Bien entendu, la concurrence provenant des autres modes de transport peut être une discipline importante et efficace et elle doit être encouragée. Pour les besoins de la présente note, nous laisserons cette question de côté. En outre, et cela est important, pour certaines catégories de passagers, différentes villes peuvent se substituer l'une à l'autre. Pour ces passagers, le marché pertinent à prendre en considération est l'ensemble de tous les aéroports qui desservent toutes les villes potentielles d'origine ou de destination. Ces passagers seront probablement protégés davantage des restrictions à la concurrence dans les services aériens dans une ville particulière.
- 2 Par exemple, les droits de décollage et d'atterrissage pourraient être divisés suivant la ligne que le transporteur est autorisé à desservir (comme c'est le cas au Japon). Pourvu que la compagnie aérienne puisse éviter qu'un droit de décollage ou d'atterrissage destiné à une ligne soit utilisé pour desservir une autre ligne, ce mécanisme permettrait à l'aéroport de faire payer des prix différents selon la ligne que le créneau dessert.
- 3 Par exemple, du fait du contrôle par l'Etat ou du fait de réglementations, comme celles des Etats-Unis, qui obligent les aéroports à réinvestir la totalité des recettes obtenues dans l'enceinte de l'aéroport.

AUSTRALIA

Australian Aviation

Until 1990, the Australian aviation industry was characterised by a 'two airline' policy. The incumbents, Australian and Ansett Airlines, were not challenged by new entry into the Airline industry because of regulatory restrictions on entry by new industry players. In October 1990, Australia relaxed this 'two airline' policy and a new small competitor, Compass Airlines entered the market. By late 1991, Compass Airlines had failed to become a true rival to the two incumbent airlines and was forced to cease business. The results of the (then) Trade Practices Commission's inquiry into the failure of compass airlines are discussed in the case studies at the end of this paper.

Airports In Australia

Australia is currently undergoing reforms of its major airports. This reform is occurring at the same time as reforms of other major utility industries in Australia, in particular the telecommunications, electricity and gas industries. Reforms in these industries are occurring in line with the reforms that have taken place in competition policy in Australia. The ownership of major Australian airports and their general regulatory framework are in the process of change.

Airport Regulation

The ACCC's Role

The ACCC is the economic regulator for Australia's major airports. The major tasks associated with this role are significantly expanded with the privatisation of airports in Australia and recent changes to competition policy in Australia. The ACCC's regulatory role has been restricted to reviewing changes in aeronautical charges at major airports. Privatisation of airports and amendments to the Trade Practices Act which introduce regulation of third party access to essential facilities involve a broader package of regulatory roles for the Commission involving:

- access arrangements;
- a price cap on aeronautical services;
- prices monitoring on aeronautical-related services;
- quality of service monitoring;
- collection and reporting of airport financial accounts; and
- a review of regulatory arrangements in the fifth year of operation of the arrangements.

Access arrangements

Airport services which are provided by significant facilities at an airport and which cannot be economically duplicated are covered by the new Part IIIA of the *Trade Practices Act 1974*. The Part IIIA provisions will imply that the terms and conditions of access to these airport services are to be negotiated between parties seeking access to airport services and the airport service providers in the first instance, with the Commission being empowered to determine access disputes notified to it. As an alternative to

this process, airport operators can give access undertakings to the Commission specifying the terms on which airport services will be made available to airlines and other users of airport services. In making access determinations and in accepting access undertakings, the Commission must assess the terms and conditions on which access is provided by an airport against the public interest, including the public interest in having competitive markets. Access determinations and undertakings are enforceable by the Commission in the Federal Court.

The *Airports Act 1996* includes access provisions in Part 13. This Part provides for the Minister for Transport and Regional Development to automatically declare essential services at airports 12 months after commencement of the lease if an access undertaking has not been approved by the ACCC by that time.

Prices oversight of airport services

The ACCC will administer a CPI-X price cap on charges for aeronautical services at major leased Federal airports. The price caps apply to aeronautical services from the commencement of leasing. Under the arrangements there is scope for operators to seek approval for charges for necessary new infrastructure investment, subject to support from 'principal users'. The ACCC will also assess new charges for aeronautical services and any restructuring of the basis of existing aeronautical charges to ensure the integrity of the price cap is maintained.

The ACCC will undertake formal monitoring of certain airport services which are not covered by price caps but where airport operators could be expected to exert significant market power. Examples of the types of services that may be covered by this process include charges for the services of check-in counters, aircraft maintenance facilities, aircraft refuelling facilities, vehicle access charges and car parking facilities.

This monitoring process is legislatively based and allows the Commission to collect information on costs, profits and prices and to report publicly on the results of its findings.

Complementary regulatory provisions

The ACCC will undertake quality of service monitoring at newly privatised airports under provisions in the *Airports Act 1996*. This Act does not provide scope for the ACCC to set the standards of service at individual airports. The ACCC will be able to report publicly on quality of service outcomes.

Airport operators are required to provide the ACCC with accounts and reports to improve the transparency of airport operations and assist in the assessment of airport performance.

Review of pricing oversight arrangements

The ACCC will review the prices oversight arrangements for newly privatised airports toward the end of the first five years of operation. The review will examine the appropriateness of the price cap applied to aeronautical charges and aim to develop arrangements targeted at those charges where the airport operator has most potential to abuse market power. A key objective of the review is to ensure that the aviation industry retains appropriate protection.

The Role of Commonwealth Minister for Transport

The major Australian airports are Commonwealth business entities which are largely self governing and self regulating and constitutionally immune from the reach of state and local government laws on matters such as planning, rating, environmental and building controls. Some state and local government laws do still apply, payroll tax is one example.

The Commonwealth Minister of Transport is responsible for oversight of the major airports and currently has a role in approving aeronautical (airport) charges in addition to the ACCC and approving corporate and development plans for the airports.

Under arrangements for newly privatised airports, the Minister of Transport will *not* have a role in approving airport charges or overseeing the financial performance of airports.

Newly privatised airports will be required to develop airport master plans and development plans for significant developments at airports which will be subject to approval from the Minister of Transport. Building activities on airport sites will also require approval. Privatised airports will be required to develop environmental strategies which take into account public comments and which are subject to Ministerial approval.

Certain on-airport activities, such as activities relating to liquor, gambling, smoking, vehicle movements and commercial trading can be controlled through relevant State/Territory laws or by Commonwealth regulation under the recent regulatory changes to airports. With respect to privatised airports, it should be noted that state and local government laws will apply except where there is overriding Commonwealth legislation in place, for example, in the case of certain on-airport activities such as liquor, gambling, smoking and trading hours.

The Minister of Transport exercises controls which protect the airspace around airports and which restrict the choice of fire fighting and rescue services. Air navigation and search and rescue activities are to remain within the responsibility of Airservices Australia, a Commonwealth government business enterprise which is responsible to the Minister for Transport and Regional Development.

Demand management schemes can be implemented at an airport by the Minister of Transport [See discussion below under "Management of Airport Take-off and Landing Slots".]

Ownership

The major airports in Australia are owned and operated by a Federal Government corporation, the Federal Airports Corporation (FAC). The FAC currently owns and operates 22 airports in Australia including all the major capital city airports. The only major airport not owned and operated by the FAC is Cairns airport which is owned and operated by the Cairns Port Authority.

Privatisation of the FAC airports has commenced and is expected to occur over the next few years. The privatisation involves the offering of long term leases for the airports. Specifically the Government is offering fifty year leases with an option of a further forty-nine years. New airport operators for Melbourne, Perth and Brisbane airports have recently been announced with the new ownership expected to commence from 1 July 1997. These airports will be owned by three separate airport companies.

The privatisation arrangements for Australian airports could be said to involve a mixture of public/private ownership to the extent that the airports have been offered for sale as long term leases rather than on a freehold basis. The use of long term leases means the airports will continue to be Commonwealth places and therefore be subject to Commonwealth regulation of certain activities on airports. The leasing of airports implies that they remain Commonwealth places which has significant implications for regulation of the airports. In particular the airports will be subject to Commonwealth regulation, as opposed to State regulatory regimes. The regulatory regime had to be clearly defined before privatisation to ensure that bidders were sure of the terms and conditions they faced.

The leasing arrangements require the continued use of the sites as airports. The leases are also subject to a number of other restrictions and controls, including restrictions on the transfer of leases, restrictions on carrying out non-airport business, restrictions on ownership of airport-operator companies, control of land use, planning and building and controls related to environmental management.

Control on the ownership of privatised airports is exercised through the general provisions of the *Trade Practices Act 1974* (S.50) and through specific provisions in the *Airports Act 1996*. Specific provisions relating to ownership include restricting foreign ownership of airport companies to a 49 per cent limit, restricting airline ownership to a 5 per cent limit and limits on cross ownership between airports. The restriction on cross ownership is set at a 15 per cent for ownership combinations of the airports of Melbourne, Brisbane, Perth, Sydney and Sydney-West, except the combination of Sydney and Sydney-West. A party that has more than a 15 per cent equity interest in one of these airports cannot own more than 15 per cent of another (except the Sydney/Sydney-West combination).

The combined effect of the application of the general merger and asset sales provisions of the Trade Practices Act and the ownership restrictions of the Airports Act, imply that potentially competitive airports are unlikely to be jointly owned and that there is vertical separation between airport and airline operation.

An exception to the above arrangements is the future ownership of Sydney (Kingsford Smith Airport) and Sydney West airports. Sydney's second airport is in the planning and development phase. Sydney and Sydney West airports will be jointly leased to a single airport operator company, though this is not expected to take place for several years yet. Joint ownership of both Sydney and Sydney-West Airports is an exception to the cross-ownership rule because Sydney-West is designed to be an overflow airport for Sydney Airport. Sydney Airport is expected to become capacity constrained in the medium term (largely due to environmental considerations) creating the need for a complementary facility to handle additional capacity. A further factor in the decision to allow joint ownership of these two airports is the consideration that competition between these airports will not lead to an efficient allocation of traffic between the airports:

- the small geographic area of Sydney airport prevents future on site expansion of that airport in response to price signals at the airport;
- there are significant noise externalities associated with the airport which also imply expansion at the same location is undesirable; and
- Australia's major domestic and international airlines, in particular Qantas, would have significant sunk costs associated with moving operations to another airport.

Financing of capacity expansions

The FAC operates as a commercial entity without public funding or subsidies for its day to day operations. However, the FAC does, on occasion, receive Commonwealth funding to undertake specific

projects (for example, a runway extension at Adelaide Airport). The Corporation has paid normal company income tax since July 1991. It raises funds on the capital market for expansion and development of facilities across its airport network. Funds have been raised through domestic bonds which are non-guaranteed.

Newly privatised airports will be expected to raise funds for expansion of capacity in a commercial manner.

Regulation of access to airport capacity

This is primarily governed by the application of Part IIIA of the *Trade Practices Act 1974* as outlined above.

In Australia the main separation between owners of airport infrastructure and the actual airport operators relates to domestic terminal at major airports. The two major domestic airlines own and operate domestic terminals under long term leases with the airport operator, the FAC. These arrangements will continue in the newly privatised airports. The trend with new airport facilities is the development of common user facilities rather than dedicated airline terminals. This is the case at Brisbane and Alice Springs airports.

Access arrangements to domestic terminals are governed by specific provisions in domestic terminal leases which predate the new access arrangement under Part IIIA of the Trade Practices Act.

Main features of standard licences for airport operation

Under the arrangements for newly privatised airports the Commonwealth will sell airport leases. The sale of three leases has raised a total of A\$3.3b, involving A\$1.3b for Melbourne Airport, A\$1.4b for Brisbane Airport and A\$0.6b for Perth Airport. There are a number of restrictions governing the leases:

- a 15 per cent cross ownership restriction on pairs of airports formed by Sydney, Melbourne, Brisbane and Perth, as discussed above in more detail;
- there will only be one lease per airport site;
- Sydney (Kingsford-Smith) Airport and Sydney West Airport to be under common ownership;
- airport leases are granted subject to existing interests in the land;
- restrictions on acquisition and transfer of airport leases;
- provisions to allow prohibition of subleases of airport leases and licences relating to airport leases.

In summary the operation of separate infrastructures within the same airport will be dependent on existing contractual arrangements and the new single airport operator. Under existing arrangements Australia's two domestic airlines operate separate domestic terminals at most airports.

Regulatory framework for airport charges

See above.

Airport charges (landing and take-off charges, aircraft parking charges, passenger processing charges) are defined as aeronautical charges in Australia. The current regulation of airport prices takes the form of cost-based prices surveillance by the ACCC. As indicated above, these charges will be subject to CPI-X price caps at major airports. The price caps are set for a five year period by the Government on

advice from the ACCC. Airport operators have the flexibility to choose the structure of their individual charges subject to aeronautical charges in aggregate complying with the price cap. Airport operators will be free to vary charges by time of day thus allowing peak period pricing in the price cap. It should be noted though that at airports where the Government institutes a demand management scheme involving charges for slots (see discussion below) that these charges will be passed through the price cap (i.e. they will be excluded from the price cap).

Under the current arrangements for FAC airports aeronautical (airport) charges are regulated under a cost based approach. Sydney Airport (Kingsford Smith Airport) has peak period pricing of landing charges.

Under the terms of the Chicago convention, to which Australia is a signatory, a country must not charge foreign airlines more for the use of airports than they charge their own airlines. While this does not prevent them from charging foreign airlines less than they charge domestic airlines, it does constrain the forms of price discrimination in which airport operators can engage.

Management of Airport Take-Off and Landing Slots

Slot constrained airports in Australia

No Australian airport is currently slot constrained, however a proposed framework for slot management at Sydney Kingsford Smith Airport (KSA) has been developed. The slots system will be introduced in support of the Government's commitment to cap aircraft movements at KSA at 80 movements per hour. It is anticipated that after further refinement of the framework the slots system will be fully implemented at KSA by March 1998.

The binding constraint

Sydney Airport has a history of departure and arrival delays for aircraft, particularly during early mornings and late afternoon periods. The congestion problem is associated with peak period cluster scheduling. The current system does not prevent airlines scheduling a number of different flights at the same time. This practice of cluster scheduling contributes to delays for passengers on the ground and in the air.

The introduction of a proposed new traffic system of slot controls is expected to improve airport efficiency by underpinning schedule reliability. This should deliver substantial time savings to interstate and international passengers which is particularly important for time sensitive business travellers.

Distribution of existing slots among airlines

Not applicable

Slot allocation decisions

Detailed slot allocation decisions have not been made, however the following system has been proposed:

National Coordination Committee

- a national body will oversight slot coordination and appoint independent slot coordinators to slot managed airports. *This Committee will not initially be required* as KSA is the only Australian airport currently scheduled for coordination. The KSA Coordination Committee will undertake the relevant functions.

KSA Coordination Committee

- a KSA Coordination Committee will formulate airport specific scheduling guidelines, consistent with this policy framework and legislation.

Slot Coordinator

- the slot coordinator will allocate slots for airlines in accordance with guidelines set down by the KSA Coordination Committee.

Criteria on which slot allocation decisions are made

Detailed slot allocation criteria have not been finalised, however the following arrangements have been proposed:

Slot Definition

- a slot is defined as the right to schedule an aircraft arrival or departure, on a specified day within a specified time frame

Slot Allocation

- slot allocation will be based on historical precedence (or grandfather rights) i.e. an operator who currently uses a slot can retain the slot. Grandfather rights will only apply to scheduled RPT services or programmed charter services, not ad hoc requests.

Slot Pool

- a slot pool is created from unallocated slots and carriers quitting slots. Unallocated slots will be distributed alternately, one for new entrants and one for incumbent airlines.

Slots for new entrants

- a new entrant is defined as a carrier who holds less than 4 slots on that day, in the category sought (i.e. regional, interstate, international). An airline which is more than 25 per cent owned by an incumbent would not be considered a new entrant. New Entrants slots cannot be swapped with another carrier (other than temporarily) in the first two seasons. If there is any doubt about the validity of a New Entrant, the matter will be determined by the Airport Operator, in consultation with other Committee members.

Slots for Regional Services

- regional services into KSA will be protected, through a separate slot pool which will ensure that the number of slots available for regional services are maintained. A regional service for KSA is defined as any service that begins and finishes within the border of NSW - any

intermediate stops also need to be within NSW. ACT-Sydney (and vice versa) services are not regional services.

Slots for Unscheduled Services

- the Coordinator will allocate a temporary slot (as close to the requested time as available) when details are confirmed (i.e. very likely to be close to the day of operation).

Relationship between slot allocation decisions and airlines

The proposed system will involve a new slot management system where each aircraft will need a designated landing or arrival time. Special slots will be reserved for new entrants and regional airlines, fulfilling the Government's commitment that residents of regional NSW will continue to have access to Sydney Airport.

Consistent failure to comply with the slot system will see airlines lose their slot allocation or be fined. The size of the fine would increase exponentially after the first offence.

All operations, except emergency or essential services, will be subject to the slot management scheme.

The Government is looking to implement the slot control system as soon as possible on a cooperative basis with industry. However, to support this process and if necessary to resolve any conflicting positions within the industry the Government will be introducing relevant legislation later this year. This legislation will enshrine an 80 movements per hour cap into law.

Implementation of slot swaps

Detailed swaps procedures have not been finalised however the following have been proposed.

Exchange of Slots

- apart from regional services, slot swaps to be allowed between operational categories, with the approval of the Coordinator - provided the operational limits of the airport are not exceeded and separation requirements of air traffic control are not compromised.

Slots Returned to Slot Pool

- once initially allocated, slots not taken up by regional services or new entrants will be returned, on a temporary basis, to the slot pool for use by any other operator. After 12 months if the slot is still not required for a regional service or by a new entrant the temporary incumbent airline can seek historical precedence for the slot.

Cluster Scheduling

- for planning purposes at KSA a rolling cap of 80 movements an hour, to be assessed every 15 minutes (both forwards and backwards), will be used. A rolling cap would assist in spreading slot allocation more evenly across the whole hour (reducing clustering) and assist in ensuring that the cap is not breached. Cluster scheduling will be regularly reviewed by the KSA Committee and may be subject to specific Government policy initiatives if evidence of inconsistency between slot coordination and cluster scheduling emerges.

Enforceable grandfather rights

See above on grandfather rights.

The following compliance arrangements are proposed:

Use-it-or-lose-it

- operators must use the slot they have been allocated at least 80 per cent of the time in the previous equivalent season or lose historical precedence for that slot.

Operating Off-slot

- for international flights this occurs when a carrier operates off-schedule (arrival or departure) by more than 15 minutes. For domestic flights the criterion is the lesser of 15 minutes or 10 per cent of scheduled flight time (rounded up to the nearest minute).

Compliance Measures

- a system of review, judgement and appeals would be established. Air Traffic Control would report off-slot occurrences to a Compliance Committee, which could fine (or otherwise sanction) operators if necessary. Legislation to support the Committee's actions, and delegations of power to an office acting on behalf of the Minister, will be developed.

Market for slots

A market for slots has not been proposed.

Leasing of slots by airlines

Not proposed

Safeguard regulatory mechanisms to prevent improper use of slots

Detailed regulatory arrangements have not been finalised

Allocation of new slots

See above

Ultimate ownership of existing slots

Slots will not have an assigned property right.

Ground Handling Services

Ramp handling services at Sydney and Melbourne airports are currently the subject of an application by Australian Cargo Terminal Operators Pty Ltd to the National Competition Council for declaration of services under Part IIIA of the Trade Practices Act 1974. Accordingly the following information relates to Sydney and Melbourne airports which are generally representative of Federal airports. Historically Ground Handling Services ("GHS") have been provided by the two major Australian airlines, Qantas and Ansett, with some limited handling performed in the check-in area by

other carriers. A third operator, South Pacific Air Motive commenced limited ramp handling operations at both airports in 1996. United Airlines performs some self handling at Sydney airport.

The provision of GHS is currently the subject of proposed major reform at Sydney airport. In the interests of increased competition and ensuring a choice of world class service providers the FAC has called for Expressions of Interest (EOI) from persons/organisations interested in providing GHS. This EOI exercise is being conducted in conjunction with a similar call for EOIs in the provision of international cargo terminal operations. Approximately 20 EOIs have been received from proponents to become authorised ground handlers at Sydney airport. It is envisaged that approximately 3 to 4 ground handlers will be appointed. Authorisation will be granted in accordance with the provisions of the *Federal Airports Corporation Act 1986* (FAC Act). At other airports the Corporation is considering the current position with respect to the traditional situation whereby Ansett and Qantas are the major ground service handlers.

Regulatory and market environment

The FAC Act and Federal Airports By-laws provide for the grant of leases, licences and authorities by the Corporation to use areas of federal airports for specified purposes and prohibit the conduct of business except in accordance with a lease, licence or authority from the Corporation. The current position whereby Qantas and Ansett have traditionally conducted GHS is not reflected in express written ground handling agreements but was a situation inherited by the Corporation and based upon past practice.

Criteria for allowing self-provision by airlines and limiting participants

At Melbourne airport self handling is allowed subject to availability of check-in counters prior to the introduction of Common User Terminal Equipment and subject to availability of space for operation and storage equipment. Space limitation is a major criterion at Sydney airport. The position generally with respect to self handling at Sydney airport is being reviewed in the context of the current EOI exercise referred to above.

Criteria for choosing identity of participants

At Melbourne airport operators must satisfy safety and security requirements. In addition, at Sydney airport, proponents in the current EOI exercise are being evaluated against a number of criteria such as capability, experience and independence to ensure that the best operators capable of delivering world best practice are selected.

Decisions of allowing self-provision or number and identity of participants

The Corporation, as owner and operator of the airports under the FAC Act makes the above decisions. At Sydney airport the evaluation committee for the EOI process includes an airline representative and the process generally includes consultation with the airlines.

Federal Airports Corporation involvement in provision of GHS

The current airport operator is not involved in the provision of GHS.

Airline involvement in service provision

As noted above, the two Australian airlines, particularly Qantas, dominate service provision.

Access to GHS by independent operators

Client airlines contract with the service providers with associated charges. Generally the IATA standard form agreement is used as the basis for these contracts.

Number of GHS providers in major airports

Two major, two subsidiary providers as discussed in more detail above.

Self provision by airlines

Self-provision by airlines plays a significant role, given Qantas and Ansett's role as the main ground handlers.

Criteria for restricting access to ground handling services

Not applicable

Regulation of ground handling tariffs

Ground handling tariffs are not regulated in Australia.

ANALYSIS

AUSTRALIAN CASE STUDY - COMPASS AIRLINES

Until October 1990, the Australian Government had a 'two airlines policy' - a policy restricting the entry of further competitors in the domestic airline industry. Under this policy, Ansett Airlines and Australian Airlines (now Qantas domestic) were the two incumbent domestic operators. After this policy was relaxed, Compass Airlines made an attempted entry into the Australian market. However, the airline failed within two years of its establishment and the Australian Trade Practices Commission ("the Commission") was requested by an Australian Minister to investigate the surrounding circumstances.

Background

The Australian Government's aviation policy had an important influence on the conditions of entry and the nature of competition in the domestic aviation market in 1991.

In October 1987 the Government announced that it would terminate the Airlines Agreement in October 1990, effectively ending the 'two airlines policy'. In practice that involved elimination of economic regulation of the following:

- controls over the importation of aircraft;
- determination of passenger capacity on each trunk route;
- setting of airfares for passenger services by the Independent Airfares Committee; and
- constraints on the entry of new domestic operators to trunk routes.

While Australia's interstate air services were opened to free competition by this decision, the Government's aviation policy continued to regulate aspects of the domestic aviation market which Compass entered in December 1990. The key features of aviation policy in 1991, which had implications for entry and competition in the domestic market, are summarised below.

Terminal leasing arrangements

Prior to the decision to deregulate domestic aviation, Ansett and Australian airlines held leases over the existing terminal facilities which made no provision for access to terminal facilities by new entrant airlines. The Government renegotiated those leases in 1987 to give new entrants some access to terminal facilities as an interim measure in the period following deregulation. The FAC was given responsibility for the construction of new terminal facilities to cater for actual and anticipated increases in demand.

In December 1987, the Government entered into long-term leases (20 years with an option for a further 10 years) with Ansett and Australian giving them a right to operate existing terminal facilities at Sydney, Melbourne, Brisbane, Perth, Adelaide, Launceston and Coolangatta airports. The airlines were also given eight year leases (with an option to renew) over significant 'expansion lands' at the airports to be used for airport related purposes.

The head leases with the airlines required them to provide each entrant airline with gates at certain terminals. They also required the airlines to provide new entrant airlines with terminal facilities of

a type normally utilised by the airline for its own operations. There are currently few alternative terminal facilities available to new entrants.

Other key features of aviation policy

The separation of domestic and international aviation markets and the Government's Foreign Investment Policy were other features of Australian Government Policy.

The final general conclusions of the Trade Practices Commission from its study of the failure of Compass Airlines are discussed below.

In its 1992 report the Trade Practices Commission concluded that on the information available to it shortcomings in the entry strategy and management of Compass itself made a significant contribution to the failure of the airline. Most importantly, Compass' entry strategy misjudged the operational, economic and regulatory obstacles to large scale entry into the domestic market in 1990. The strategy also misjudged the competitive advantages of the incumbent airlines, their likely responses to the additional capacity introduced by its entry and the capitalisation required to achieve viable entry under those conditions. In addition, the severity of the recession worsened the market environment for all three major airlines, resulting in fiercer competition than might have otherwise occurred.

Shortcomings in the entry strategy and management of Compass appeared to be the most important contributing factor to the failure of the airline. Importantly, Compass' entry strategy misjudged the operational, economic and regulatory obstacles to large scale entry into the domestic market in 1990. It also misjudged competitive advantages of the incumbent airlines, their responses to the additional capacity introduced by Compass and the capitalisation required for successful entry in these market conditions.

Compass' entry strategy involved providing a single class service on major trunk routes at fares of 80 per cent of the standard economy of the incumbents and 50 per cent for back-of-the-clock services. This strategy assumed Compass had a cost advantage and the incumbents would not respond competitively.

A report by the Australian Bureau of Transport Communication Economics ("BTCE") in 1991 determined that Compass had significantly lower operating costs than the two incumbent airlines because it used larger aeroplanes and offered a "no frills" service. However, the TPC report concluded that Compass Airlines failed because it misjudged what was possible in the Australian market. Its strategy of competing very strongly on price against the two powerful established airlines, despite having only limited capital, was almost inevitably bound to fail in the prevailing Australian market conditions. The Compass strategy misjudged in particular:

- the type of aircraft and pricing strategy that would be appropriate;
- the effect on fare levels of bringing additional capacity into the market;
- the effect of limited access to terminals;
- how the established airlines were likely to respond to its entry; and
- the amount of capital required.

Other contributing factors were the impact of the recession, the presence of excess capacity in the market, the competitive responses of Ansett and Australian and the problems experienced by Compass in gaining access to appropriate terminal facilities.

Because of their powerful market positions as the established airlines, Ansett and Australian had the capacity to place a new entrant airline at a relative disadvantage, particularly in relation to the high yield passenger market. It is quite a different question, however, whether their competitive conduct during 1991 constituted a breach of the Trade Practices Act. During its study the Commission did not find indications of predatory pricing within the meaning of the Trade Practices Act on the part of the incumbent airlines. The airlines' ownership of CRSs, travel agent links, provision of business lounges and frequent flier incentives are structural features of the market. While they may make it more difficult for smaller entrants to compete, no indications were found that they resulted in misuse of market power in terms of the Trade Practices Act.

On the information available, the TPC found reason to believe that Compass was disadvantaged to some extent in its ability to compete by the nature and terms of the access it was given to terminal facilities under its sub-lease with Australian. This disadvantage was not as great as it might have been because Compass did not seek to compete for high yield traffic until late in 1991.

To the extent that Compass suffered some damage from inadequate access to, and control over, appropriate terminal facilities, the long-term leases between the Government and the incumbent airlines were a contributing factor, particularly in view of the lack of appropriate alternative terminal facilities for new entrant airlines at major airports. Access to appropriate terminal facilities is also likely to be a problem for prospective new entrants to the industry in the short-term, pending the construction of sufficient additional terminal facilities to alleviate the problem.

The report concluded that given the relatively small size of the Australian aviation market and the considerable risks associated with larger scale entry by newly established airlines, competition, efficiency and service quality in the domestic aviation market could be enhanced by permitting greater entry to the domestic market by Qantas and Air New Zealand.

AUSTRIA

Ground Handling Services

What is the regulatory and market environment for the provision of ground handling services?

The Austrian Civil Aviation Authority (CAA) regulates the suppliers access to this market under §§ 74,103 Luftfahrtgesetz BGBl.Nr.253/1957 and §§ 14f. Zivilflugplatz- Betriebsordnung BGBl.Nr.72/1962. This legislation has been somewhat liberal as far as selfhandling is concerned, but enshrined airport monopoly on third-party-handling. This policy will be changed after implementation of Council Directive 96/67/EC due on 25 October 1997.

a) *What are the criteria by which self-provision by airlines is allowed or not allowed?*

Landside-selfhandling is in general permitted to all air operators.

b) *What are the criteria by which the number of participants is limited?*

Capacity constraints at check-in-counters sometimes limited the number of selfhandlers. If there are conflicting demands, the "grandfather principle" is applied.

c) *What are the criteria by which the identity of participants are chosen? Who makes the choice?*

The airport management.

To what extent is the airport operator involved in service provision?

All 6 Austrian airports are entitled and obliged to offer the whole package of land- and airside ground handling services.

To what extent is the dominant airline involved in service provision?

Between Vienna Airport & AUA and the 5 regional airports & Tyrolean there exist special arrangements, so that landside services are in fact provided in close cooperation between airport and dominant airline.

Is access to these services by independent operators and/or airlines free?

No.

Approximately, how many companies are currently providing handling services in major airports?

Nil.

Does self-provision by airlines play a significant role?

Yes - at Vienna Airport, where LAUDA AIR, DLH, KLM, BA and some US-airlines have their dedicated check-in-counters for landside-selfhandling. At regional airports selfhandling is of much lesser importance.

What are the criteria, if any, for restricting access to ground handling services?

Not applicable (see General Remarks).

Are ground handling tariffs regulated?

Yes, as they are considered to be monopolistic tariffs the so-called traffic handling and ramp handling charges are regulated by CAA: at VIE by way of a price-cap-formula, at the regional airports in a less formal, more discretionary way.

General Remarks

Austrian civil aviation policy has been characterized by strong sympathies for monopolies and cartels - as everywhere in Europe after 1944. Ground handling has been no exception and was regarded as domain of the airports, maybe mitigated by some sort of cooperation with the dominant national airline. It was seen as the duty of CAA to keep out all competitors (especially *foreign* competitors), so that revenues of airports and social standards of the well- organized airport labour force could be maintained.

After Austria joined EEA on 1 January 1994 the liberalization process set in quite suddenly. It might be said that the ongoing opening up of the Austrian aviation markets - with the ground handling market as one of its segments - must be credited completely to the EU, as nearly all liberal achievements have been forced upon Austrian civil aviation by "Brussels".

CAA has now the delicate task to mediate between outside pressure and national inertia to ensure that dramatic set-backs for the so-long well-protected Austrian aviation business and ensuing social turbulence is avoided.

CANADA

Airports

Who is the airport regulator? What are its main tasks?

The federal department of transportation, Transport Canada, Safety and Security Group is responsible for the technical regulation of the operation of Canadian airports.

The main tasks of the Civil Aviation Directorate, Aerodrome Safety, in the Safety and Security Group, are to establish regulations and standards for the safe operation of airports and to certify airports against these regulations and standards to a specified level of operations as well as to monitor compliance through a process of audits and inspections.

The Civil Aviation Directorate is also responsible for regulations, standards, certification, monitoring and compliance respecting related aviation matters including aircraft, air carriers, air navigation and fire-fighting services.

The Safety and Security Group is also responsible for the regulations and standards relating to security at airports.

There are no Transport Canada regulations governing economic matters. Local accountability and status as not-for-profit entities provide an appropriate framework for pricing and consultation with users without regulatory oversight.

What is the prevailing ownership regime of airport infrastructure (private/public, national/federal/local)? Are there situations of mixed private/public ownership? Do airlines own significant shares in airports? Are airports within the same airport system usually owned and/or operated by the same entity?

There are some 726 airports in Canada certified by Transport Canada for operation (out of approximately 2,000 aerodromes). Some are privately owned, but the vast majority are owned by municipalities, provincial and territorial governments, or the federal government, some of whose airports are now operated by local airport authorities. Plans are in place to commercialise as many as possible of the 149 airports with Transport Canada involvement. Military airports are under the management of the Department of National Defence and, as defence facilities are decommissioned, a small number of military airports are also becoming available for local purchase and civilian use.

Announced on July 13, 1994, the National Airports Policy outlines plans for all federally owned commercial airports as follows:

The federal government will retain ownership of the 24 airports making up a defined national airports system consisting of the airports in the national, provincial and territorial capitals and those that handle at least 200,000 passengers per year, but will transfer their operations to not-for-profit local airport authorities through long-term leases. These airports serve more than 90 per cent of all scheduled passenger and air cargo traffic in Canada.

Ownership of the 69 regional and local airports with scheduled traffic below 200,000 passengers per year will be offered to provincial and local governments, airport commissions, private businesses and other interests. To encourage takeovers before the year 2000, measures have been introduced to increase the viability of the airports by reducing the short-fall between costs and revenues at each site.

The 25 small and satellite airports that do not have scheduled passenger services were transferred to local interests by March 31, 1997. The six general aviation, recreational and flight training satellite airports associated with international airports will be offered to their respective airport authorities. In the absence of interest by them, these airports will be made available to other local interests.

Fourteen remote airports providing year round access to isolated communities will continue to receive federal assistance. The 11 Arctic airports have already been transferred to their respective territorial governments.

There has been only one significant example of private/public ownership in Canada and this came to an end in December 1996. The newest of the three terminals at Lester B. Pearson International Airport (LBPIA), Toronto, was built and operated by a private consortium with a lease/purchase agreement with the Government of Canada. In December 1996, the recently created local airport authority exercised the right in that agreement and purchased the terminal on behalf of the government.

Airlines do not own shares in airports in Canada.

The government's policy is to encourage management and operation of as many of the airports in a local system as appropriate by the local airport authority.

How are capacity expansions financed? Do public funds, subsidies or preferential loan conditions play a significant role?

Public funds and subsidies play a decreasing role in capacity expansion. As the federal government turns over the operation of its airports to local airport authorities, through long-term leases, it also turns over the financing of any airport capacity expansion. It continues to provide limited subsidies and capital assistance to some of the airports with which it remains involved.

How is access to the market for airport capacity regulated? Is there a separation between the owners of airport infrastructure and the actual airport operators?

The decisions relating to capacity expansion at existing airports is shifting from the federal government to the local airport authorities.

The federal government continues to own the major airports in Canada, but in turning over their operation to others, it has also transferred to the airport operators the authority to decide when and how airport capacity will be expanded.

Decisions on new airport development will involve all levels of governments, given all the factors to be assessed.

What are the main features of standard licences for airport operation (e.g. fees payable to the licensor, service obligations, extent of exclusive rights by licensee, if any)? Are there instances where several different companies are operating infrastructure at the same airport?

Local airport authorities, as they take over the management and operation of all the major airports in Canada, do so on the basis of long-term leases and operating principles which conform to Canada's regulations and standards and respect Canada's international commitments. Government revenues are generated in the form of rents paid by the local airport authorities.

While different companies do not operate airport passenger terminal infrastructure, major airports have on their sites various additional facilities which are owned and operated by private companies for such purposes as maintenance and cargo handling.

Air navigation services are now also provided by a not-for-profit private company (Nav Canada) and its revenues are to be generated by user fees. The infrastructure associated with these services are now in the hands of Nav Canada.

What is the regulatory framework for airport charges (landing and take-off charges, aircraft parking, passenger charges)? What is the degree of freedom of the airport in setting charges? Are charges set by a regulator? Are they cost-related? Is peak-load pricing allowed? To what extent do international treaties put constraints on the design of airport charges?

In Canada, airport charges are no longer set by a regulator except to the extent that each entity establishing charges is required to adhere to Canada's international obligations in this regard.

The Canadian Acts providing the legislative authority to allow the commercialisation of airports and air navigation services set down charging principles rather than a detailed formula for setting fees. In the case of airports, charges must be competitive and non-discriminatory, if traffic levels are to be maintained and market growth encouraged. In the case of air navigation services, the charging principles include the requirement to relate charges to costs and rules for giving public notice and mandatory consultation. Appeals respecting the process of consultation on user charges can be raised with the Canadian Transportation Agency.

Peak hour pricing has been considered but never implemented in this country. However, minimum landing fees have been charged at major airports to affect the traffic mix.

Airports are free to introduce local passenger fees as a means of generating revenues for capital improvements or expansions of infrastructure.

As a signatory of the Chicago Convention, Canada is constrained to operate within the framework set out in that agreement, notable article 15. In addition, Canada seeks to abide by the ICAO Recommendations on airport and other charges.

Slots

Which, if any airports are slot-constrained for at least some parts of the day?

Lester B. Pearson International Airport (LBPIA), Toronto, is slot coordinated for the entire operational day. It is also coordinated for gate availability and terminal capacity for all three terminals. Vancouver International Airport is coordinated for gate and terminal facilities.

What is the nature of the binding constraint, e.g. noise restrictions, terminal constraints?

LBPIA has runway landing and take-off constraints of not more than 78 movements per hour and not to more than 20 movements in any one quarter hour.

Terminal 1 has gate and facility availability, while Terminal 2 is full and Terminal 3 is full or near full during peak hours.

Approximately, what is the distribution of existing slots among airlines at each slot-constrained airport?

At LBPIA, the only slot-constrained airport in Canada, the distribution of existing slots among airlines is as follows:

- Canadian owned major airlines including Air Canada, Air Ontario (AC regional affiliate), Canadian Airlines International and Canadian Regional (CAIL regional affiliate) - 74 per cent
- Canadian owned charter airlines - 7 per cent
- American owned airlines - 15 per cent
- Foreign owned international airlines - 3 per cent (99 per cent)

How are slot allocation decisions made?

Slot allocation decisions at LBPIA are made by an impartial Slot Co-ordinator and his staff who are well experienced in air carrier scheduling and operations. The LBPIA Scheduling Committee is used by the coordinator as a sounding board for potentially controversial decisions or policy change matters.

What are the criteria by which slot allocations are made?

The IATA Scheduling Procedures Guide is used in the decision-making process.

Criteria for selection include consideration of historic rights (grandfathering) and use-it-or-lose-it rules.

How does (do) the decision-maker(s) relate to the airlines?

The slot co-ordination decision maker for LBPIA is a not-for-profit private consulting company named Escot Consulting Services Inc. which has been in operation for eight years and is paid by the Canadian-owned carriers. The Co-ordinator and his staff are ex-airline employees with more than 100 years of total airline experience. LBPIA was the first airport in the world to have a Slot Co-ordinator who was independent and not an airline employee.

How are slot swaps implemented (scheduling committees, clearance coordinator)?

Slot swaps are encouraged by the slot co-ordination staff who supply the air carriers with information on which slot holdings are available for trade.

The air carriers involved in a swap make an arrangement between themselves with regard to the slots to be swapped and then send in a submission to the Co-ordinator for approval and implementation. Historic rights then accrue to the carrier who actually operates the slots.

To what extent are grandfather rights actually enforceable?

Grandfather (historic) rights are considered to be a right of the carriers and vital to the on-going success of air carrier scheduling on a continuing year to year basis. A legitimate historic slot is never taken away from a carrier.

Is there a monetary or non monetary market for existing slots? In the event, are trades frequent?

There is no monetary or non-monetary market for existing slots in Canada.

Can slots be leased by airlines?

Slots cannot be leased by airlines in Canada.

What safeguard regulatory mechanisms prevent improper use of slots by incumbents?

The Co-ordinator has the authority, using documented misuse of slots, to remove the slot and its historic value from an offending carrier.

How are new slots allocated?

New slots are allocated by the Co-ordinator using the IATA Scheduling procedures and Guidelines. Normally new slots are included in the procedures which are followed prior to the start of a new schedule season.

To whom do existing slots ultimately belong?

Existing slots belong to the airport operator, which in the case of the National Airport System airports, is the Government of Canada through the department of transportation, Transport Canada.

Ground handling

What is the regulatory and market environment for the provision of ground handling services?

What is the criteria by which self-provision by airlines is allowed or not?

Economics of the market determine whether an airline should self handle at any given airport. The exception is LBPIA, Toronto, where one of the three Terminals is leased to Air Canada and Air Canada controls the bulk of the handling of the aircraft at that location. Other service providers operate at the other terminals.

What is the criteria by which the number of participants is limited?

Limitation on the number of participants has historically not been a problem, except for safety concerns related to the capacity of the airport to accommodate them.

c) (i) What is the criteria by which the identity of the participants is chosen?

Not applicable

(ii) Who makes the choice?

The airport operator will ultimately be responsible for the choice, and may make that choice in conjunction with a committee made up of user airlines at the airport.

To what extent is the airport operator involved in service provision?

At this time, no major airport operator is directly involved in the provision of ground handling services.

To what extent is the dominant airline involved in service provision?

Air Canada, as the largest national carrier and present at all major airports, offers ground handling service as a means of utilizing resources (manpower and equipment) and generating revenue and also as part of interline agreements for service with other carriers.

Is access to these services by independent operators and/or airlines free?

All ground handling is provided on a fee for service or exchange of service basis. The airport authorities to date have not assessed a fee or charge for ground handlers operating at their sites, other than on catering firms which are required to pay a percentage of gross revenue.

Approximately, how many companies are currently providing handling services in major airports?

A table is attached which details the variety of ground services available at various Canadian airports.

Does self provision by airlines play a significant role?

Self provision of service by Air Canada plays a significant role as Air Canada can handle its own ground handling needs and offer service to others. Canadian Airlines International, on the other hand,

does not self handle at most sites, but contracts service, thus having a significant impact in having independent service available at a site.

What are criteria, if any, for restricting access to ground handling services?

Safety considerations related to the ability of the airport to physically accommodate service providers have been the only criteria to date.

Are ground handling tariffs regulated?

Ground handling tariffs are not regulated by any government body and are market based.

# OF A/P	AIRPORTS	ENPLANED AND DEPLANED PASSENGERS
1	Toronto L.B. Pearson Int'l. ON.	20 885 070
2	Vancouver Int'l., BC	11 030 152
3	Montréal Dorval Int'l., QC.	5 677 257
4	Calgary Int'l., AB.	5 291 178
5	Montréal Mirabel Int'l. QC.	2 375 956
6	Ottawa MacDonald-Cartier Int'l., ON.	2 360 926
7	Halifax Int'l., NS.	2 284 414
8	Winnipeg Int'l., MB.	2 240 127
9	Edmonton Int'l., AB.	1 776 639
10	Victoria Int'l., BC.	726 943
11	Québec Jean-Lesage Int'l., QC.	682 871
12	St Johns, NF.	625 597
13	Saskatoon J.G. Diefenbaker, SK.	546 007
14	Regina, SK.	505 852
15	Thunber Bay, ON.	456 867
16	Kelowna, BC.	317 387
17	London, ON.	317 336
18	Prince George, BC.	241 897
19	Moncton, NB.	222 958
20	Yellowknife, NW.	217 169
21	Fredericton, NB.	193 376
22	Saint-John, NB.	191 438
23	Subbury, ON.	191 281
24	Charlottetown, PE	178 902
25	Whitehorse, YT	122 476
26	Gander Int'l., NF.	94 748

Source: air Carrier Traffic at Canadian Airports - 1995

GROUND HANDLING SERVICE						
# OF A/P	Catering Airlines	Other	Cargo or/and		Fuel	Cargo Only
			Passengers Airlines	Other		
1	0	4	5	5	C	n/a
2	0	3	3+	3	C	n/a
3	0	2	3	5	C	0
4	0	2	2	1	C	1
5	0	2	3	5	C	0
6	1	2	2	2	2	0
7	0	1	6	4	3	0
8	n/a	n/a	n/a	n/a	C	n/a
9	0	1	4	1	C	0
10	0	2	1	5	2	0
11	0	2	2	4	6	0
12	0	1	1	2	4	0
13	1	3	4	4	2	0
14	0	5	4	2	3	0
15	0	4	3	1	2	0
16	0	1	2	3	2	0
17	0	1	3	1	2	1
18	0	1	1	4	2	0
19	0	1	2	1	2	9
20	0	4	5	1	3	0
21	0	1	2	1	2	0
22	0	1	2	1	2	0
23	0	1	0	2	2	0
24	0	0	0	3	2	0
25	1	1	2	3	2	0
26	0	1	0	3	3	0

C = Concertium of Airlines with specialized agent.

ESPAGNE

Introduction: Brève description du cadre aéroportuaire

La gestion des aéroports civils d'intérêt général est confiée à l'entité publique Aéroports Espagnols et Navigation Aérienne (AENA). Cet organisme régulateur du domaine aéroportuaire a été créé par la Loi 4/1990 et est actuellement affecté au Ministère des Travaux Publics.

AENA est un organisme à personnalité juridique propre et indépendante de celle de l'Etat, avec pleine capacité juridique - publique et privée - et dispose d'un patrimoine propre. Dans l'exercice de ses activités, elle est gouvernée, selon les cas, par l'ordonnance juridique civile, commerciale et sociale ou par les dispositions de Droit public qui lui sont applicables.

Par l'intermédiaire d'un Conseil d'Administration, AENA exerce, entre autres, les suivantes fonctions:

- Aménagement, direction, coordination, exploitation, conservation et administration des aéroports public à caractère civil et des services qui leur sont affectés.
- Proposer au Gouvernement l'approbation des taxes des droits aéroportuares.
- Approuver les périodes fractionnelles de temps pour réaliser les atterrissages et les décollages
- Octroyer les concessions et les autorisations pour l'utilisation du domaine public aéroportuaire.

Les ressources d'AENA sont issues :

- des produits, des ventes et de l'accroissement de son patrimoine.
- des revenus ordinaires et extraordinaires obtenus dans l'exercice de son activité.
- des subvention qui, le cas échéant, peuvent être incluses dans les Budgets Généraux de l'Etat.

En résumé, nous pourrions dire qu'AENA est une entité publique jouissant de la double condition de personne juridique publique et d'opérateur économique.

À cet égard, et selon l'interprétation du Tribunal de Défense de la Concurrence, AENA agirait en tant qu'entité publique dans toutes les situations ayant rapport à la gestion et l'utilisation du domaine public aéroportuaire, à la perception de revenus publics et à l'aménagement des services aéroportuares.

La gestion et l'exploitation de l'activité aéroportuaire, ainsi que ses activités complémentaires d'embauche, seront cependant soumises à l'ordonnance juridique privée.

Fourniture de services d'assistance au sol

La directive 96/67/CE du Conseil du 15 Octobre 1996 concernant l'accès au marché de services au sol dans les aéroports de la Communauté réglemente, entre autres aspects, la restriction du nombre d'agents, sa sélection et l'auto-assistance. De la même façon, elle définit les différents types de services au sol.

Néanmoins, étant donné que cette Directive n'a pas encore été transposée, les règles d'application sont contenues dans la Loi 4/1990 de création d'AENA, dans le Décret Royal 95/1991 du 14 juin la développant et dans un Ordre Ministériel de 1973. Ce dernier constitue la première disposition qui régularise les services au sol.

D'autre part, comme nous avons déjà indiqué, AENA a une double caractéristique, publique et privée: dans le premier cas, elle agit comme une entité publique soumise au droit administratif, et dans le second, en tant qu'opérateur économique soumis au droit privé.

Les deux aspects sont essentiels puisqu'ils servent à déterminer si les actions d'AENA sont du ressort de la loi de Défense de la Concurrence 16/1989.

En appliquant ces principes aux services de "handling" nous pouvons signaler que:

- 1) Les actions d'AENA en tant qu'entité publique sont axées sur l'aménagement et le contrôle de la réalisation du service de handling, de façon générale, dans tous les aéroports (Aspect réglementaire). Nous pouvons citer les suivantes:
 - . Détermination de la modalité du service: il peut être prêté directement par AENA ou par l'intermédiaire d'un tiers autorisé par un contrat ou une cession.
 - . Etablissement de règles générales.
 - . Choix d'un opérateur unique à caractère national prêtant le service dans tous les aéroports du pays, ou de plusieurs le prêtant uniquement dans certains aéroports.
 - . Décision d'introduire un second opérateur privé dans les aéroports à plus grand trafic.
- 2) AENA agira comme opérateur économique dans tout ce qui concerne le "handling", ainsi que les relations avec les entreprises qui le réalisent, lesquelles sont sélectionnées par concours ou autorisées par un contrat privé (aspect contractuel).

Actuellement, le service de "handling" en Espagne est prêté selon les suivantes modalités:

- . Par la compagnie IBERIA, qui a obtenu en 1992 une concession de régime juridique privé, en général, pour tous les aéroports.
- . En tant que second opérateur, par les entreprises qui auront gagné les concours convoqués pour la réalisation du service dans un aéroport concret.
- . Par les propres compagnies aériennes, en régime d'auto-handling au moyen d'un contrat privé souscrit entre elles et AENA, leur attribuant l'autorisation correspondante et contrôlant les conditions de réalisation du service.

Nous décrivons ci-dessous les caractéristiques de chacune de ces modalités.

Comme premier opérateur

Par le passé IBERIA jouissait, par la procédure d'adjudication directe, de la concession des services de handling en tant qu'opérateur unique en régime de monopole.

En 1992, comme premier pas vers la libéralisation du secteur, un concours public en régime de libre concurrence a été organisé pour les compagnies aériennes, nationales et étrangères. L'objectif était de désigner un premier opérateur pour les trois blocs de services (Passagers, rampe et marchandises et courrier), pour une période - reportable - de sept ans, dans tous les aéroports espagnols, en régime de

non exclusivité. AENA se réservait le droit de désigner, après l'adjudication, un second opérateur pour un ou plusieurs aéroports.

Le concours incluait une classification des aéroports espagnols (ANNEXE I) en deux groupes, en fonction du volume de trafic de passagers par an. Ceux du premier groupe - avec un trafic supérieur à un million de passagers par an - pouvaient introduire un second opérateur.

Le concours a été gagné par IBERIA, qui a été la seule compagnie qui s'est présentée comme enchérisseur. Le nouveau concessionnaire - IBERIA - était le seul en mesure de remplir les conditions requises dans les bases du concours: disponibilité d'effectif, équipement et installations pour la réalisation du service dans tous les aéroports, avec les niveaux de qualité requis et autres prescriptions techniques.

Certains aspects du concours témoignent de l'ambiguïté, du point de vue juridique, des pratiques d'AENA au moment de gérer les services de handling. Ainsi par exemple, le cahier des clauses comprend simultanément des aspects relevant des concours administratifs - Régime général de la "concession", mention du concessionnaire comme "adjudicataire", "rachat" du service par AENA comme cause d'annulation de la concession - et des contrats privés, comme le renvoi aux Tribunaux de Madrid pour la résolution de conflits pouvant surgir.

AENA, au moyen de déclarations publiques, a essayé d'amoinrir cette dualité en signalant que le concours ne doit pas être considéré comme une concession à caractère publique, mais comme un contrat privé.

Comme second opérateur

Les bases du concours de 1992 indiquaient, dans la partie concernant le régime général de la concession, la possibilité d'établir un second opérateur de handling. Il y avait en outre une classification des services de handling en blocs indépendants:

- Bloc 1: Handling de passagers
- Bloc 2: Handling de rampe
- Bloc 3: Handling de marchandise et de poste

Ces blocs se divisent à leur tour en plusieurs services. Les services de base ne pouvant pas être rendus de façon fractionnelle, les services complémentaires que le concessionnaire est obligé de prêter sur demande lorsque le service de base de handling du bloc a été engagé et les services que le concessionnaire pourra prêter s'il en a les moyens.

Ces services peuvent être engagés séparément. Il est également possible de sous-traiter certaines activités - par exemple, le catering - comprises dans les premiers.

Actuellement, deux unions temporaires d'entreprises (UTE) menées respectivement par Entrecanales y Cubiertas et FFC-Air Europe, ont obtenu les licences pour prêter les services de handling, comme second opérateur, dans les seize (y compris celui de Santiago) aéroport libéralisés.

La seule exception est celle des services de chargement dans les aéroports de Madrid et de Barcelone, qui ont été attribués au consortium formé par l'entreprise publique ALDEASA et l'entreprise OGDEN de l'Amérique du nord.

Auto-handling

Avant 1992, un Ordre Ministériel de l'année 1973, qui établissait la réglementation de base des services, indiquait que "en accord avec les recommandations de l'OACI", les compagnies aériennes pourraient effectuer elles mêmes leurs propres services au sol, avec la concession préalable du Sous Secrétariat d'Etat à l'Aviation Civile.

Postérieurement AENA a permis la pratique de l'auto-handling avec une plus grande flexibilité. En fait, les compagnies ont prêté ce service au moyen de licences délivrées par AENA, d'autorisations tacites ou même par l'intermédiaire d'accords avec IBERIA, pour rendre compatible l'engagement de leurs services comme opérateurs au tiers et la réalisation de l'auto-handling de base pour passagers.

Afin d'obtenir un plus grande libéralisation du marché, l'auto-handling de passagers a été accru dans les dernières années, et en plus petite mesure, celui de rampe. Celui de marchandises est encore inexistant de nos jours.

Dans le concours de 1992, AENA fixait une première réglementation, à caractère général, permettant aux compagnies intéressées de réaliser les services au sol pour leurs vols et avec leurs propres moyens, de façon totale ou partielle (par blocs).

L'autorisation pour effectuer l'auto-handling se formalise par contrat privé. Il existe un modèle de contrat-type avec une série de conditions générales et économiques.

Parmi les conditions générales, il faut souligner la durée minimum - un an - du contrat renouvelable sur une base annuelle ainsi que les causes de dissolution du contrat.

Cette clause de dissolution a été très critiquée par les compagnies aériennes qui entendent que:

- plusieurs opérateurs de handling au tiers peuvent coexister avec l'auto-handling ;
- la cause de la résiliation ne peut pas leur être imputée.

Parmi les conditions économiques, soulignons la redevance que les compagnies doivent payer à AENA, le besoin de déposer un cautionnement à d'AENA et l'obligation de souscrire une police annuelle d'assurances pour pourvoir aux dommages matériels ou personnels.

Ces conditions économiques ont été durement critiquées du fait qu'elles peuvent être considérées comme une façon de décourager l'auto-handling, en empêchant l'accès à la réalisation du service propre dans des conditions rentables.

Ces conditions ont été dénoncées en 1993 par l'Association Espagnole de Compagnies Aériennes (AECA) auprès du Service de Défense de la Concurrence (SDC) comme pratiques restrictives par abus de position dominante par:

- l'inclusion dans les contrats pour la réalisation de l'auto-handling d'une clause de résiliation unilatérale lorsqu'une licence sera délivrée à un second opérateur.
- l'imposition, dans l'engagement de l'auto-handling, d'une redevance de cinq per cent sur les tarifs minimum autorisés au concessionnaire, qui devra être versée à AENA.

Après l'ouverture de l'enquête correspondante, AENA a cessé de réaliser ces deux pratiques. Cependant, le Tribunal de Défense de la Concurrence a sommé le SDC d'entamer une enquête sur les pratiques antérieures à 1995.

Voici d'autres conduites restrictives incluses dans la même dénonciation:

- discrimination des compagnies aériennes au moment d'octroyer les autorisations pour l'auto-handling ;
- refus injustifié d'autoriser l'autohandling coopératif ou réciproque.

Sur demande du TDC, ces comportements ont aussi été examinés par le SDC afin de les analyser du point de vue du droit de la concurrence.

Tarifs

La double caractéristique publique et privée d'ANEA pose des problèmes au moment de qualifier son activité en matière d'imposition de prix.

Toutefois, d'après l'interprétation du TDC, les prix du handling ne concernent pas l'utilisation du domaine public aéroportuaire, mais plutôt la réalisation d'un service.

En outre, étant donné qu'ils sont imposés par le Conseil d'Administration d'AENA, sans que l'approbation du Gouvernement ou du ministère sectoriel soit nécessaire, la LDC pourrait leur être appliquée.

Ainsi, par exemple, dans les dénonciations déposées par AECA contre AENA, figurait aussi l'imposition abusive de prix pour le handling.

A cet égard, il faut souligner que le SDC a reçu du TDC la mission d'enquêter sur le rapport entre les tarifs de prix imposés par AENA et leurs coûts.

Les tarifs officiels en vigueur ne sont pas de caractère obligatoire, mais ils fixent les quantités limites à appliquer par le concessionnaire du service.

Ce caractère de limite maximum des tarifs officiels peut être modifié par AENA puisque celle-ci exerce la faculté discrétionnaire de les augmenter lorsque les services de handling de base sont prêtés en heures de pointe. Cet aspect est recueilli dans les bases du concours qui a été organisé en 1992.

Conclusion

Le processus de libéralisation entamé en 1993 par AENA a permis que les aéroports espagnols ayant plus d'un million de passagers par an aient deux opérateurs - IBERIA et ceux qui gagneront les concours pour un second opérateur convoqués par chaque aéroport - capables de prêter les services de handling.

De cette façon, l'une des exigences du processus de libéralisation entamé par l'UE, dans lequel s'encadre la Directive 96/67/CE du Conseil, serait satisfaite.

L'introduction de la concurrence dans ce secteur a obligé IBERIA, qui était la seule à l'exploiter jusqu'à il y a trois, à baisser sensiblement ses tarifs (jusqu'à 40 per cent en 1995).

ANNEXE I

<u>Groupe 1</u>	Madrid/Barajas Barcelona Palma de Mallorca Gran Canaria Tenerife/Norte Tenerife/Sur Málaga Lanzarote Alicante Ibiza Menorca Sevilla Valencia Fuerteventura Bilbao
<u>Groupe 2</u>	Almería Asturias Córdoba Gerona Granada Hierro La Coruña La Palma Melilla Pamplona San Sebastián Santander Santiago Vigo Vitoria Zaragoza Badajoz-Talavera Jerez Murcia (San Javier) Reus Salamanca Valladolid

Lorsque certains des aéroports classifiés dans le groupe 2 surpassent un million de passagers/an pendant un an, AENA pourra l'inclure dans le groupe 1 à partir de la date de l'avis au concessionnaire.

GERMANY

Airports

In Germany, airports may only be built and operated with the approval of the competent authorities. The aviation authority of the Federal Land in which the airport is situated is responsible for granting such approval. The main tasks of the aviation authorities are the preservation of aviation safety and the protection of the general public.

The legal system in the Federal Republic of Germany contains no provisions on how commercial airports have to be legally organised. The owners of the German commercial airports - which are almost exclusively public (Federal, Land, district, local) entities - have, however, selected to adopt the form of commercial companies under private law as their legal structure for reasons of expediency. The operators of German commercial airports are therefore organised as limited liability companies (GmbH) or, as in the case of Frankfurt Airport, as joint stock companies (AG). Alongside the local authorities and the Federal Länder concerned, five of the large German commercial airports (Flughafen Frankfurt/Main AG, Berlin Brandenburg Flughafen Holding GmbH, Flughafen Hamburg GmbH, Flughafen Köln/Bonn GmbH and Flughafen München GmbH) also currently count the Federal Government among their shareholders.

The ownership structures of airports are, however, in a state of flux: a trend towards privatisation is visible, which is likely to be increased principally as a result of the planned withdrawal of the Federal Government and the Länder. Deliberations on bringing several airports under the control of a "Deutsche Flughafen AG holding company", as suggested by Frankfurt Airport, are controversial and have little chance of being put into practice from today's point of view. One can, however, detect a trend towards the establishment of airport systems as illustrated by Flughafen Frankfurt/Main AG's purchase of a majority stake in Flughafen Saarbrücken Betriebs GmbH or by Frankfurt's intentions to purchase a shareholding in Düsseldorf Airport which has just been put out to tender by the Ministry of Economics of the Land of North Rhine-Westphalia.

At present no airlines hold shares in German commercial airports. It would be undesirable for them to do so both on transport policy and competition policy grounds since there would otherwise be a danger of their competitors being disadvantaged. The airports of the Berlin-Brandenburg airport system (TXL, THF and SFX) are all owned by the same holding company. It is expected that they will be privatised in the near future.

The airport operators make use of investment funds from various sources to finance capacity expansions. In its statistics for the 1995 business year, the German airport association, Arbeitsgemeinschaft Deutscher Verkehrsflughäfen, reports total investments of German commercial airports amounting to DM 1,913 million. These investments came from the following sources: 12.7 per cent was raised by the shareholders (public funds), 83.3 per cent was raised by the airport companies themselves (assets, self-generated funds and loans) and 4 per cent was provided by third parties.

There has been no separation of owners of the infrastructure and airport operators so far in Germany. Consequently both, the airport operators and the airport infrastructure, are currently publicly owned. It can, however, be expected that the growing enlistment of private investors to finance future large-scale projects will bring about changes in this respect.

The content of the government permit for an airport is stipulated in Section 42 of the Air Traffic Licensing Regulations (Luftverkehrs-Zulassungs-Ordnung). No licence fees have to be paid to the authorities issuing the licence. Under Section 45 of the Air Traffic Licensing Regulations, the airport operator is required to maintain safety and security at the airport and to operate it properly (so-called obligation to ensure continuous service). The airport companies are the sole operators of the airport infrastructure. Third-party companies usually act as service providers and licensees.

Aircraft take-off, landing and parking charges as well as fees for the use of passenger facilities are regulated by the airport operator as part of the utilisation regulations and must be submitted to the competent aviation authority for approval (cf. Section 43 (1) of the Air Traffic Licensing Regulations). One can assume that the airport operator has a fair amount of leeway in setting its charges. A decisive factor for this is probably the congruency of economic interests between the authorising Land, which as a rule is the joint owner of the airport, and the airport operator. In practice, however, the level of airport charges in Germany varies from airport to airport.

Slots

Frankfurt, Düsseldorf, Berlin, Stuttgart, Köln/Bonn and München are slot-constrained airports for at least some periods of the day (peak hours).

The nature of the binding constraint varies from airport to airport. In Frankfurt and Düsseldorf there are constraints on the take-off and landing runway capacity; Düsseldorf also has noise restrictions; in other cases there are terminal constraints and a lack of parking ramps.

Distribution of existing slots among airlines is different at each slot-constrained airport. Even though no precise figures are available it is obvious that Deutsche Lufthansa AG as the former flag carrier has the biggest share of slots in Germany.

Slot allocation decisions are made by the scheduling co-ordinator, the so-called "Flugplankoordinator der Bundesrepublik Deutschland" in Frankfurt. The scheduling co-ordinator acts on the basis of a mandate from the German Ministry of Transport; he is financed by the airline industry. Allocation decisions have to be made completely independently according to the rules of EU Regulation 95/93 and the IATA Scheduling Procedures Guide.

The most important criteria by which slot allocation decisions are made are the so-called "grandfather rights". They mean that airlines are entitled to use slots once allocated to them for an unlimited period as long as they comply with the so-called "use it or loose it" rule. Other priorities are for frequent flight services or trunk services.

Airlines have to submit their applications for slots to the scheduling co-ordinator at a certain time before each new flight schedule period. The world-wide "fine-tuning" of the slot allocation takes place at the IATA Schedule Co-ordination Conferences twice a year.

Slot swaps (exchange of slots 1:1) are implemented under the supervision of the scheduling co-ordinator and between airlines themselves. The scheduling co-ordinator considers slot swaps to be in line with EU Regulation 95/93.

There is consensus up-to-date that German transport policy does not touch upon "grandfather rights".

Although slot trading is not allowed under the existing slot regime it is rather likely that a monetary market for slots already exists. Sometimes the acquisition of slots arises from the take-over of another airline company.

At present slots cannot be leased by airlines.

The scheduling co-ordinator may withdraw slots allotted to airlines if the latter use their slots in a manner different than stated in their application to the scheduling co-ordinator. It is incidentally difficult at present to identify, and practically impossible to counter, improper use of slots by incumbents. From a competition perspective the following types of improper use of slots invite criticism: hoarding of slots, i.e. airlines apply for more slots than they will actually use; continued operation of poorly utilised services to prevent slots being reallocated to competitors; transfer of slots to third parties under co-operation agreements - slots then have to be used on behalf of the former incumbent and are consequently unavailable for independent competitors.

New slots are allocated according to the usual priority rules. However, the slot regulation (EU Regulation 95/93) provides that 50 per cent of the total available amount of new slots shall be allocated to new entrants.

Under the "grandfather rights" existing slots belong de facto to the incumbent; however, the view that slots really belong to the airport has been gaining ground.

Groundhandling Services

The regulatory environment for groundhandling services at German airports is undergoing fundamental change as a result of the adoption of Council Directive 96/67/EC of 15 October 1996 on access to the groundhandling market at Community airports. This directive provides for groundhandling services to be liberalised by fully opening up access to the "land-side" services (i.e. entry to and exit from airport and ancillary infrastructure and handling services) and giving limited access - possibly on capacity or safety grounds - to the "air-side" services (i.e. restricted and security sensitive areas of ramp, maintenance, aircraft parking apron, taxiway, take-off and landing runways). This directive is currently being transposed into national law, with the deadline being set at 24 October 1997. Transposition into German law is likely to occur by ordinance - currently in the planning stage - which will be issued by the Federal Ministry of Transport on the basis of the Luftverkehrsgesetz (Air Transport Act) of the Federal Republic of Germany. This ordinance is likely to be modelled largely on the Council Directive 96/67/EC of 15 October 1996 on access to the groundhandling market at Community airports; reference is made to the content of this directive to the extent that the legal situation de lege ferenda in Germany is affected.

The current situation of groundhandling services at German airports varies according to conditions prevailing at the individual airports concerned. While access to the market for land-side services has largely been achieved, the same cannot be said of air-side services. Therefore, as far as ramp handling is concerned, the airport operator often continues to be the only provider of certain handling services. At best, the former flag carrier is present either as an independent provider or jointly with the airport operator as party to a joint venture. In the past this was justified by Section 45 of the Air Traffic Licensing Regulations which requires the airport operator to maintain safety and security at the airport and

to operate it properly. This obligation also requires the operator to make the airport available to authorised aircraft for take-off, landing and parking during operating hours according to the licensed airport operation.

The airport operator provides all air-side handling services, and as a rule land-side services as well.

Often, the former flag carrier provides ramp services (see above) and in the case of passenger handling (self-handling) this is the rule.

Access to groundhandling services is not free; in future access will have to be granted according to the criteria contained in the EU groundhandling directive (see above).

Approx. 2 to 10 companies are currently providing land-side handling services in major airports; with respect to the air-side handling services there are only 1 to 2 companies.

All major airlines in terms of passenger numbers provide their own land-side handling services.

Capacity constraints at the ramp and safety concerns are the most common criteria used to justify restrictions (see above). The soundness of these criteria is often doubtful.

Ground handling tariffs are not regulated.

Analysis

The debate in Germany about the adoption of the EU Groundhandling Directive has shown that any moves towards opening up markets stand a better chance of succeeding if they originate from supranational institutions. The directive's aim of opening up the market is most welcome because the presence of at least one provider that is independent of both the dominant airline and the airport operator is essential for effective competition to take place in groundhandling services. Nevertheless, from a competition perspective the EU Groundhandling Directive is only the lowest common denominator which clearly reflects the need to reconcile clashing interests of individual EU member states, the European airline industry and the European airports. Therefore European and national competition law enforcement will continue to play an important part in future insofar as access to markets and abusive practices of market-dominating firms at airports are concerned.

As regards the allocation of slots, the Federal Cartel Office considers a reform of European slot allocation rules to be desirable in order to give new entrants better market access. If the existing slot regime remains in place, the EU's liberalisation efforts, such as the recently adopted cabotage rights for European airlines, risk being thwarted in part, because slot constraints at certain airports make it impossible for newcomers to start operations as long as existing slots are not (re-)allocated on the basis of competitive criteria.

HUNGARY

Airport

The authority responsible for regulating aerodromes is the Directorate of Civil Aviation within the framework of the Ministry of Transport, Communication and Water Management and the Civil Aviation Authority.

The government intends to turn the Airport Budapest into a hub for Central Europe.

The aerodrome infrastructure exclusively belongs to the state, which does not share it with any airlines. Mixed ownership does not occur. The owner and the operator are the same person.

Budapest-Ferihegy is currently being enlarged. The expansion of capacity is financed by state subsidies with the exception of terminal 2/B, which is financed mainly by loans with the help of foreign investments.

Due to the pressure of competition, the operator of the aerodrome has gradually allowed private commercial activity on the aerodrome. The actual operator of the infrastructure and the aerodrome cannot be separated.

Bilateral agreements regulate the main features of standard licences. Depending on the licence, companies might operate several pieces of infrastructure within the same airport.

Act 97 of 1995 on Aviation regulates airport charges. According to the proposals of ICAO and other international air transport services the LRI (Airport and Air Traffic Administration) set fees dependent on topical expenses. Peak-load prices do not exist. Set charges are approved by the authority concerned in agreement with IATA.

Slots

The Slot allocation procedure in Hungary is made in accordance with the EC Regulation No 95/93 and according to the IATA recommendations stated in the Scheduling Procedure Guide.

The General Airport Coordinator has been appointed by the Director General of Civil Aviation and as an independent body is entitled to allocate slots in accordance with the above regulation and recommendations in a transparent, non-discriminatory and neutral manner.

The tasks of the General Airport Coordinator are fulfilled under the supervision of the Coordination Committee, which is an advisory body consisting of all parties interested in the slot allocation.

Ground handling

Bilateral agreements regulate ground handling rights. Decree No. 12/1993 of the Ministry of Transport authorises LRI to provide ground handling service or have it provided by a third-party under contract. On Ferihegy Airport only the flag carrier MALEV has the right to provide ground handling services. The airport operator has the exclusive right to provide services to small aircraft, however, it provides service to only 1 per cent of large aircraft. MALEV is involved in 99 per cent of ground handling. Independent operators do not have access to provide these services. Two companies are currently providing handling services.

Self-provision does not play a significant role; only MALEV self-provides.

Analysis

Concerning ground handling, this is a complex legal issue. Decree No. 12/1993 of the Ministry says that it is the LRI that provides it or has it provided by a third-party under contract. Consequently it is an enterprise falling under the definition of the Act on the Prohibition of Unfair Market Practices.

The Act on Aviation says the activity of air transport, or an activity which has to do with air transport for economic purposes, can only be performed when the Civil Aviation Authority has given the necessary license. The legislation seems to assume this guarantees free market access.

As the Director General of Civil Aviation said on the Hungarian-EU negotiations on harmonisation with EU law, MALEV and LRI dominate ground handling (monopoly or duopoly situation). For capacity and safety reasons self-handling is only provided to the Hungarian flag carrier. The current situation raises the question of discrimination since the right of self-handling belongs only to the same permanent entities.

The situation will change on inauguration of the new terminal as the Project Company will open up self-handling to economic competition. (The EU Regulation require “several” and not just two ground handling companies, so the situation had to be changed in this respect.)

The Hungarian competition law does not contain transport-specific regulations. The current regulation prevents airlines from co-operating to form a cartel.

Ferihegy Airport should also conform to EU law. The airport operator and flag carrier relationship should follow international practice and methods.

ITALY

Basic airport data

In 1995, the output of the Italian commercial airport industry amounted to around 770 000 air traffic movements: i. e. 59 million passengers and 600 000 tons of merchandise and mail. General aviation, which is significant in some countries, is totally irrelevant in Italy, accounting for less than one per cent of total passengers carried each year.

Italian commercial airports are reported by the Directorate General for Civil Aviation of the Ministry of Transportation (Civilavia) to be 46, the current sectoral regulator. Of these, only one (Roma-Fiumicino), with 23 million of work-load units per year, was among the 40 largest world airports, in two others (the airports of Milano, Linate and Malpensa) work-load units are more than 5 million per year and all the others feature a traffic of less than three million work-load units per year, the threshold beyond which returns to scale from airport activity are generally thought to be constant¹.

Relative to other European countries, Italian airport infrastructure is characterised by a lower average size of major international airports, a larger number of medium-sized airports and a wider dispersion of air traffic over the territory. In particular, while in France and in the United Kingdom 60 per cent of total air traffic is concentrated in airports located around the nations' capitals, in Italy the same percentage of traffic is (unequally) distributed over the airports of Roma and Milano. The Italian airport network is therefore polycentric and, in view of the industry reorganisation spurred by the completion of air transport liberalisation in the European Union, both the airport systems of Roma and Milano may be candidates for a possible hub.

Ownership regime and other economic features of the airport industry

Currently, the totality of Italian airport infrastructure is state-owned, either directly by the Ministry of Transportation and local authorities or indirectly by public banks, public holdings and the public-owned flag carrier. Capacity expansions are financed through a variety of public support means, including direct fund transfers from state or local government budgets, investment by state-owned holdings and preferential loans by European Union financial institutions.

All major airport operators are organised in joint-stock companies. The airport systems of Roma (including two airports) and Milano (including two airports) are each owned and operated by a single entity: in Roma by a company which is under majority-control of IRI, the Treasury-owned state holding, in Milano by a company which is under majority-control of the City of Milano. Especially in some medium-sized airports, such as Napoli, Firenze and Genova, the flag carrier holds minor stakes in the airport capital, while the remaining stake is owned by local authorities. Private stakes are usually minimal.

A recent law provides for the corporatisation of all airport operating companies not yet turned into joint-stock companies and the elimination of previous constraints on the amount of shares to be owned by private investors. Related regulations, yet to be approved, would forbid majority-control of airport companies by carriers and would impose strict self-financing provisions for both current and capital expenditures.

In Italy most airport companies directly provide ground-handling services. In addition, it is not uncommon for major airport operators (e.g. the Roma airport system) to provide directly also commercial services, such as catering or duty-free shops within the airport premises. As a result, the number of employees of Italian airport companies and the reported revenues from the sale of aeronautical services, which include ground handling activities, are much higher than those of other European airports which usually contract out the provision of these services to independent service companies. For these reasons, but also because of overstaffing, the productivity of major Italian airports, measured in terms of work-load units per employee, is much lower than in other large European airports. Returns from the airport business also generally compare unfavourably with other airports in the rest of Europe. This is partly related to the relatively low growth in revenue generated by commercial activities, usually the most dynamic component of turnover in the airport business.

Airport regulation

Regulation of the airport industry affects access to the market for airport capacity by airport operators, access to airport capacity by airlines, access to the markets for airport services by service providers and the pricing of both capacity and services.

In Italy, the general criteria for regulating the airport industry are set out by several laws which define the licensing regime for airport operators, procedures for accessing airport service markets and mechanisms for the determination of airport tariffs. Recent European Union directives and regulations, not yet fully implemented, provide the general framework for setting the market regime for ground handling services and the characteristics of the slot allocation process.

There is no independent authority responsible for airport regulation. Most regulatory functions, such as evaluating capacity constraints, allocating slots and setting or assessing tariffs are currently performed by the Ministry of Transportation. However, responsibility for some important functions, such as the fixation of airport charges, are shared with a number of other ministries, making the whole process particularly cumbersome and inflexible.

Currently, airports are operated under a licensing regime which, in major airports, covers both the management of infrastructure and the provision of airport services. Licensees, which need not be chosen through competitive-bidding procedures, are assigned exclusive rights over the provision of airport services, including ground-handling services, and pay annual fees, related only to traffic movements, to the Ministry of Finance. A recent law, not yet fully implemented, partly liberalizes access to ground handling services, in order to comply with European directives.

Airport charges for landing, take-off and parking as well as passenger charges are strongly regulated and are set uniformly across the nation's airports, leaving virtually no room at all for discretion by airport operators. The level of charges, which is increased by 50 per cent at night time, is mainly a function of aircraft weight at take-off but also depends on whether the flight is on a national or an international route, a discrimination which could be inconsistent with provisions of the Treaty of Rome.

The current structure of charges is largely unrelated to costs incurred by the airport operator and does not differentiate between peak and off-peak periods. On the contrary, being related only to aircraft weight and higher at night, it induces congestion by favoring daytime flights and does not provide incentives to carriers to use aircrafts with lower impact on airport capacity utilisation. Currently, the level of charges in Italian airports appears to be among the lowest in Europe. While in some airports, such as London-Heathrow and Gatwick, low charges result from a deliberate regulatory choice aimed at

controlling overall returns of operating companies, in Italian airports it is the by-product of a rigid administrative procedure, unrelated to company profits and traffic conditions.

However, a recent law, not yet implemented, establishes new criteria for the determination of airport charges, partly cost-based, and makes peak-load pricing possible for airport operators. Although the setting of charges would still be subject to a complicated administrative procedure, the structure of charges may become in the future more consistent with supply and demand conditions. Italy has signed no international treaties that would constrain, beyond the provisions contained in the International Civil Aviation Organisation statements (which require non discrimination, cost orientation and transparency), the ability of airport operators to set different levels of charges across airports or to apply peak-load pricing.

Slot constraints

Implementation of community regulation 95/93 has led the government to declare 11 airports “fully-coordinated”. However, previous assessments by the Ministry of Transportation found evidence of congestion, during limited periods of the day, only at the airports of Milano-Linate and Roma-Fiumicino. According to studies by private consultants, capacity constraints affected the number of runways in Milano and terminal space in Roma. The building of a new international passenger terminal is deemed to have removed the constraint in Roma, while the capacity of existing infrastructure in Linate has been recently expanded by a wide reorganization of the airport’s activities, which increased the number of slots available at peak periods.

However, establishing the degree of congestion in major Italian airports is not easy. In general, there is no ready-to-use measure of airport congestion since the related costs, which define the supply curve for airport capacity (up to a technical ceiling determined by the fixed amount of infrastructure available in the short term), are not observable. At best, what is observed is the degree of capacity utilisation (defined in a very technical, not economic way as the percentage of use of the infrastructure throughout the day). Some estimates suggest that average capacity utilisation at Milano-Linate and Roma-Fiumicino is around 35 per cent lower than in London-Heathrow and Frankfurt, two of the busiest airports in Europe, and 20 per cent lower than in Paris-Charles de Gaulle. Clearly capacity utilisation need not bear any relationship to the comparative level of congestion across airports since, depending on the technology used by each airport (e.g. type of infrastructure, methods of traffic control) and on the structure of demand (e.g. average size of aircrafts), the costs associated with a given level of capacity utilisation may vary widely.

A better indicator of capacity constraints across different airports would be the willingness to pay for a slot at peak periods by carriers. In the absence of a market for slots, the cost of accessing airport capacity to carriers is currently represented by the sum of the cost of obtaining a slot (through negotiations or litigations with other carriers) plus the regulated airport charges to be paid upon use of the slot. Given that airport charges are generally deemed to be well below the level that would equilibrate supply and demand for capacity (and often even below the long run marginal costs incurred by airport operators), at this price quantity rationing is likely to emerge in many airports. The difference between the willingness to pay for a slot and its current (implicit) cost may partly reflect excess demand for airport capacity, which in turn may be related to congestion. According to some estimates, the willingness to pay for a slot in Roma-Fiumicino is higher than in Milano-Linate. Recent cross-country estimates suggest that the value of a slot at Milano-Linate or Roma-Fiumicino is about 70 per cent lower than in London-Heathrow and 10 to 20 per cent lower than in Frankfurt. Of course these rankings do not reflect only scarcity but also possible differences in costs and the intrinsic value of slots at different airports within the carriers networks.

Maybe the best available measure of excess demand in Italian airports is the degree of litigation between carriers over the assignment of slots. From this point of view, ever since domestic flights were liberalised, slots at Milano-Linate have been the most contended by incumbents and new entrants. Litigations over slot allocation and usage in Milano-Linate have led to complaints to the national scheduling coordination committee, to the Ministry of Transportation and, in two cases, to the Antitrust Authority (see below).

Slot regulation

Traditionally, the use of slots has been assigned to airlines according to historical precedence (so-called “grandfather rights”), while “last resort” property rights were implicitly retained by the state. As a result, the flag carrier (and its smaller affiliates), which prior to European liberalisation used to monopolise national and international routes, holds a very high share of slots in major Italian airports, reaching 65 and 70 per cent in Milano and Roma, respectively.

In the last few years, Italy has been slowly adjusting to EC regulation n. 95/93, which has provided the framework for slot allocation in airports of the European Union. As already mentioned, in 1994 a number of airports were designated as fully-coordinated and national and local airport coordination committees, attended by the clearance coordinator and representatives of the Ministry of Transportation, of air traffic control officials, of airport operators and of national and international airlines, were created. However, EC procedures for assigning new slots and monitoring the usage of existing slots, mainly designed to favour the access of new entrants in fully-coordinated airports, have seldom been applied. Such procedures consist in the designation of an independent clearance coordinator, the effective monitoring of slot usage in order to apply the so-called use-or-lose rule, the creation of a slot pool (including slots made available by expansion or reorganisation of existing capacity, slots withdrawn from incumbents due to insufficient use and slots voluntarily surrendered by incumbents) and the assignment by the clearance coordinator of at least 50 per cent of newly available slots to new entrants.

Until recently, the Ministry of Transportation assigned to the flag carrier (Alitalia) the duty to perform clearance activities. Alitalia in turn designated as coordinator one of its employees. In assigning slots, the coordinator appeared to deal first with exact historic rights (i.e. requests by incumbents of slots already used in the previous season), then with other requests, treating likewise retimed historic rights (i.e. slot exchanges among incumbents) and requests for new slots on a first come-first serve basis, with priority given to scheduled over charter operations. Only very limited slot monitoring was made, partly due to inadequate data collection and computerized systems, and no slot pool has been established.

In 1996 a decision by the Antitrust Authority found the flag carrier responsible of abusing of its dominant position in the clearance process by discriminating against potential competitors. Partly as a result of the Authority’s intervention, Alitalia gave up its mandate as clearance coordinator. The Ministry is currently envisaging the creation of an independent agency responsible for clearance at fully-coordinated airports.

Although not explicitly forbidden, no monetised slot trade or leasing of slots appears to have ever occurred in Italian airports. So far, the clearance coordinator has been responsible for slot swaps (such as allocation of retimed historic rights), which by the way have been quite rare.

Ground handling

As mentioned above, partly due to the “global” licensing regime currently in force in all major Italian airports (encompassing virtually all airport activities), ground-handling services are overwhelmingly provided directly by airport operators. In several medium and small-sized airports, monopoly of an operator is replaced by monopoly of Alitalia, which is allowed to provide to herself and to third parties ground-handling services.

The monopoly over ground-handling services has been eroded only in a minimal way by self-provision of services by a few foreign carriers in the airports of Roma and Milano, which was often made possible by the intervention of the Antitrust Authority (see below). In Roma-Fiumicino self-provision is performed by two foreign companies, as well as by Alitalia; in Milano-Linate by two foreign carriers; and in Milano-Malpensa by three foreign carriers. With one exception, self-provision contracts concern only a limited range of services, generally pertaining with the handling of passengers. Save for Alitalia, which provides ground-handling services to third parties in a number of medium and small-sized airports, provision to third parties by carriers or independent service companies is virtually absent. Only in Milano the airport operator has sub-licensed two small service companies to provide a very limited range of services to third parties in Linate and Malpensa.

The competitive situation improves only marginally in such services as aircraft catering and supplementary security. Partly as a result of interventions by the Antitrust Authority (see below), in Roma catering services are provided also by an independent service company while supplementary security services are provided by a number of service companies and carriers. In Milano, the airport operator has contracted out aircraft catering to two independent service companies.

The regulatory and market environment is bound to change after the recent approval of EC directive n. 96/67, which set the timetable for the liberalisation of ground-handling services in airports of the European Union. A recent law, not yet fully enforced, relaxed the licensing regime for the provision of these services, establishing the right for independent operators to access the market subject to authorisation by the airport operator.

On the tariff side, current regulatory provisions leave airport operators relatively free to set prices of ground-handling services as well as rental fees or royalties to be paid by carriers or independent service companies where ground handling is self-provided or provided to third parties. Tariffs set by operators are approved by default and only an *ex post* monitoring by the Ministry of Transportation is foreseen. The laxity of tariff regulation in ground-handling services stands in stark contrast with the strict regulation of airport charges.

Competition policy in the airport sector

The Italian Antitrust Authority has dealt with a number of competition issues which have arisen in the context of airport activities, with regard to both the market for air transport services and the markets for ground-handling services. The Authority acted to enforce competition law where Alitalia or the airport operator abused of their dominant position as well as to advocate a change in rules and regulations where existing ones unduly restricted competition and favoured anti-competitive behaviour by incumbents. As already mentioned, the main results of the Authority’s interventions were to prompt pro-competitive changes in the regulatory environment and to contribute to greater market access by new entrants.

Overall, six abuses of a dominant position were found, of which two by the flag carrier on the Milano-Roma city-pair route, three by the operator of the Roma airport system and one by the operator of the Milano airport system on markets for airport services. In addition, three advocacy reports concerning regulation of airport activities were issued to Government and Parliament.

Investigations concerning the flag carrier dealt, among other things, with abuses of its dominant position on the Milano-Linate/Roma-Fiumicino route connected with its control over a large share of slots at the Milano-Linate airport and with the strategic use of the mandate to perform clearance coordination, conferred to it by the Ministry of Transportation. In the first case, closed in 1994, the flag carrier was found to largely underutilize its share of slots on the Milano-Roma route, by systematically cancelling flights, in order to occupy existing slots and foreclose entry by new carriers on the same route. The Authority's judgment prompted the Ministry of Transportation to issue new regulations embodying some of the, previously ignored, provisions of EC regulation n. 95/93, such as the creation of a scheduling coordination committee at the fully-coordinated Milano-Linate airport and the so-called use-or-lose rule, according to which grandfather rights over slots cease to hold when they are used less than 80 per cent of the time.

In the second case, closed in 1996, the flag carrier was found to have used, over the 1988-1995 period, its position as clearance coordinator to increase its share of slots at the Milano-Linate airport while at the same time rejecting requests for slots by new entrants. Right before the end of the investigation, the flag carrier resigned its mandate as clearance coordinator, prompting the Ministry of Transportation to take *interim* responsibility for coordination, while a new regulatory framework, involving the creation of a specific agency, is put into place. In this connection, an advocacy report by the Authority urged the Ministry of Transportation to design membership and funding of the new agency in order to ensure independence from incumbent carriers.

Abuses by airport operators concerned the markets for ground-handling services in Roma-Fiumicino and Milano-Linate and for aircraft catering services and security services in Roma-Fiumicino. Interventions by the Authority in the markets for ground-handling services, which shared essentially the same features in Roma and Milano, are of particular interest because they were instrumental in affirming the right of carriers to self-provision. The right to self-production in legal monopoly markets is explicitly stated in the Italian competition law. Using this provision, the Authority judged that the refusal, by airport operators in Roma and Milano, to undersign self-provision contracts with some foreign carriers constituted an abuse of dominant position, even though the current licensing regime assigns airport operators exclusive rights over provision of airport services. To that effect, an advocacy report to Government and Parliament was successful in preventing the approval of a new law aimed at limiting the scope for self-provision of ground-handling services. In addition, the Authority also considered abusive the attempts by airport operators to use their price-setting prerogatives in ground-handling services in order to discriminate against competitors of the flag carrier, for example by setting different tariffs for equivalent services, as well as to impose payment for services not actually delivered, for example by defining tariffs with reference to a bundle of services.

In the markets for catering and security services at the airport of Roma, the airport operator denied access to the airport premises and discriminated against companies wishing to compete for airline catering and supplementary security. In both markets the licensee held a dominant position (a *de facto* monopoly in catering and a 70 per cent share in security). The Authority argued that the operating license does not confer to the airport operator the exclusive right to provide catering and security services.

In the case of catering, despite the defendant's claim that access was not technically feasible, no objective justification was found for the refusal to deal and the defendant was charged with the attempt to

extend its monopoly power in contiguous markets, hindering competition and damaging users of catering services due to the higher prices and lower quality of services supplied by the incumbent to airlines. An interesting aspect of this case is that the cost structure of the incumbent firm in the catering market was heavily influenced by extremely high labour costs, presumably due to rent sharing with unionised workers. Entry by a competitor would therefore seriously jeopardize the market share of the incumbent. The existence of rent sharing phenomena was later confirmed by the strong opposition of unions to attempts by the airport operator to sell part of its catering activities in the airport premises to a private firm, in spite of guarantees by the buyer that it would keep employment levels unchanged².

In the case of security services, the defendant was charged of unduly extending its exclusive rights over the infrastructure using the licensing process to acquire sensitive commercial information concerning potential competitors and granting licences to supplementary security companies in a discriminatory way. As in the catering case, no objective justifications were found for refusals to deal. In addition, fees charged to licensees were found to discriminate among security companies, applying different contractual conditions to companies providing similar security services.

NOTES

- 1 One work-load unit equates one passenger with luggage to 100 Kg of merchandise or mail.
- 2 Interestingly, trade unions proposed to withdraw their opposition to the sale in exchange of a lump sum transfer to each employee, effectively monetising the rents enjoyed under public ownership.

JAPAN

Introduction

A Study Group of the Fair Trade Commission (“FTC”) issued, on March 12, 1997, a report reviewing government regulations in domestic air passenger transportation services.

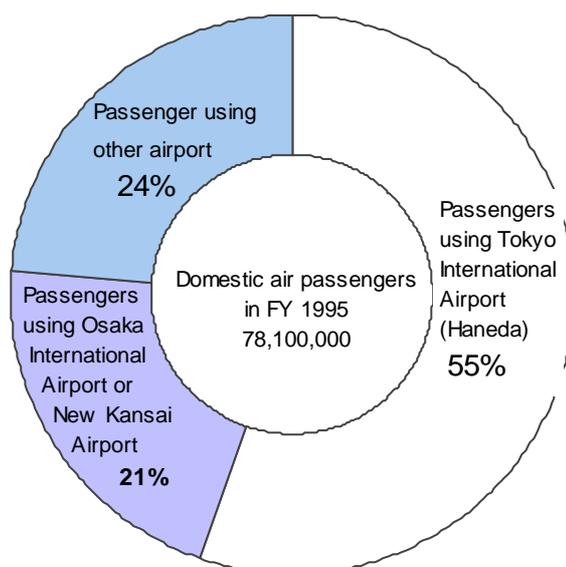
The report is comprised of the recommendations of the above-mentioned Study Group and a fact-finding survey conducted by the General Secretariat of the FTC. This paper summarizes the report encompassing: an overview of domestic air passenger transportation services, progress of regulatory reform in this sector, and the Study Group’s evaluation of regulatory reform from the viewpoint of competition policy.

Overview of domestic air passenger transportation services

Domestic air transportation passenger services are usually divided into trunk routes (routes between airports in Sapporo, Tokyo, Osaka, Fukuoka and Naha) and local routes (routes that are not trunk routes). In terms of passenger volume, 26,323,000 passengers (35.3 per cent) travelled on trunk routes and 48,224,000 passengers (64.7 per cent) travelled on local routes in FY 1994.

Fig. 1 shows passenger volume classified by airport in FY 1995 and it is evident that Haneda (Tokyo) airport accounts for a high percentage of the domestic air transportation demand.

Fig. 1 Ratio of domestic passenger volume accounted for by Tokyo, Osaka and New Kansai International Airports FY 1995



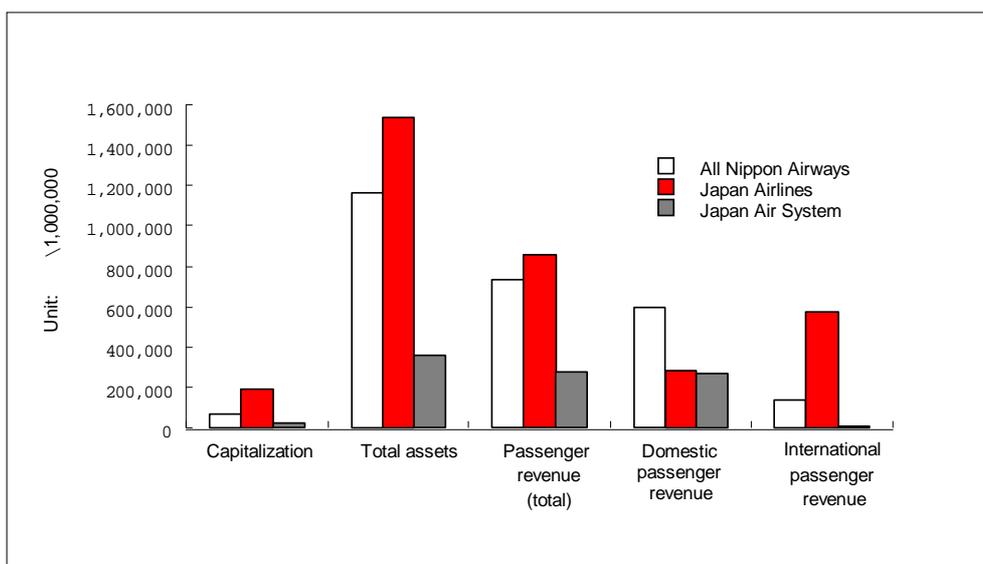
Source : Ministry of Transport Materials

Although Haneda Airport’s capacity for take-off and landing slots (hereafter referred to as “slots”) has been limited until now, the number of slots is going to increase starting from the summer of 1997, since the airport has recently been expanded.

Eight carriers are currently engaged in domestic air transportation services in Japan. Six of these carriers offer domestic air passenger services: All Nippon Airways Co., Ltd. (ANA), Japan Airlines Co., Ltd. (JAL), Japan Air System Co., Ltd. (JAS), Air Nippon Co., Ltd., Japan Transocean Airlines Co., Ltd., and Japan Air Commuter Co., Ltd. Of these companies, Air Nippon, Japan Transocean Airlines and Japan Air Commuter are subsidiaries of ANA, JAL, and JAS, respectively, and the domestic aviation industry in Japan is primarily operated by these three parent companies, hereafter referred to as the three major carriers.

Fig. 2 shows total assets and passenger revenue of the three major carriers. There are differences in the scale of their operations.

Fig. 2 Comparison of the Three Major Carriers(FY 1995)



Source: Materials provided by each carrier.

With the exception of the subsidiaries of the three major carriers, there have been no new entrants since 1963 in the field of domestic air passenger services. However, the possibility of new entry appears likely on account of the increase in the number of slots at Haneda Airport as of summer 1997. ¹

Government Regulations and Recent Developments in Regulatory Reform

Entry Regulations

Entrepreneurs that seek to provide air transportation services are required to procure a license for each route from the Minister of Transport (Civil Aeronautics Law, Section 100.1). Upon receiving a request for such, the Minister of Transport conducts an appraisal from the viewpoints of the legal clause

for supply and demand control (a system in which government authorities evaluate the appropriateness of new entry in light of supply and demand trends in the said industry), the appropriateness of the business plan from a management and civil aeronautics safety perspective, and the capability of the entrepreneur to carry out the planned services.

The Minister of Transport allocates slots to carriers concurrently with the route licenses.

Fare regulations (price regulations)

Entrepreneurs offering domestic air transportation services set the fares and tariffs for their services and are required to receive authorization from the Minister of Transport (Section 105.1). However, they are permitted to discount their fares by up to 50 per cent upon notifying the Minister of Transport and insofar as the discount is not projected to reduce their total revenue (Section 105.4; Civil Aeronautics Law Enforcement Regulation, Section 217).

70.72 Regime

The basic framework for carriers' operations was decided by a 1970 Cabinet decision and a 1972 notification by the Minister of Transport (the so-called "70.72 Regime") which determined the business fields of each carrier with a view to eliminating excessive competition among carriers for promoting co-existence. As a result, JAL has been allowed to operate international routes and domestic trunk routes. ANA has operated domestic trunk routes, local routes, and short-distance international charter flights; and Toa Domestic Airlines (present-day JAS) has been authorized to operate domestic local routes and a portion of existing trunk routes

Abolition of the 70.72 Regime

Upon the receipt of an interim report issued by the Transportation Policy Council, the Japanese government abolished in December 1985, both the 1970 Cabinet decision and the 1972 Ministerial notification by the Minister of Transport in order to respond to the changing environment in the air transportation industry. The Transportation Policy Council thereafter submitted a report to the Minister of Transport in June 1986. Seeking to improve user convenience by fostering competition among carriers, the report recommended double and triple tracking on domestic routes (operations by multiple carriers on one route), complete privatization of JAL, and authorization for multiple carriers on international routes.

In response to this report, the Japanese government immediately devised quantitative standards for the promotion of double and triple tracking on domestic routes and notified the said carriers.

JAL was fully privatized in 1987.

Regulatory Reform of Fare Regulations

Legislation was enacted in June 1994 that partially revised the Civil Aeronautics Law to facilitate the setting of air fares and tariffs by carriers, at their own discretion, and in response to the needs of users. Under that system, carriers were only obliged to submit notification of commercial discount fares and tariffs, when offering a discount rate of up to 50 per cent.

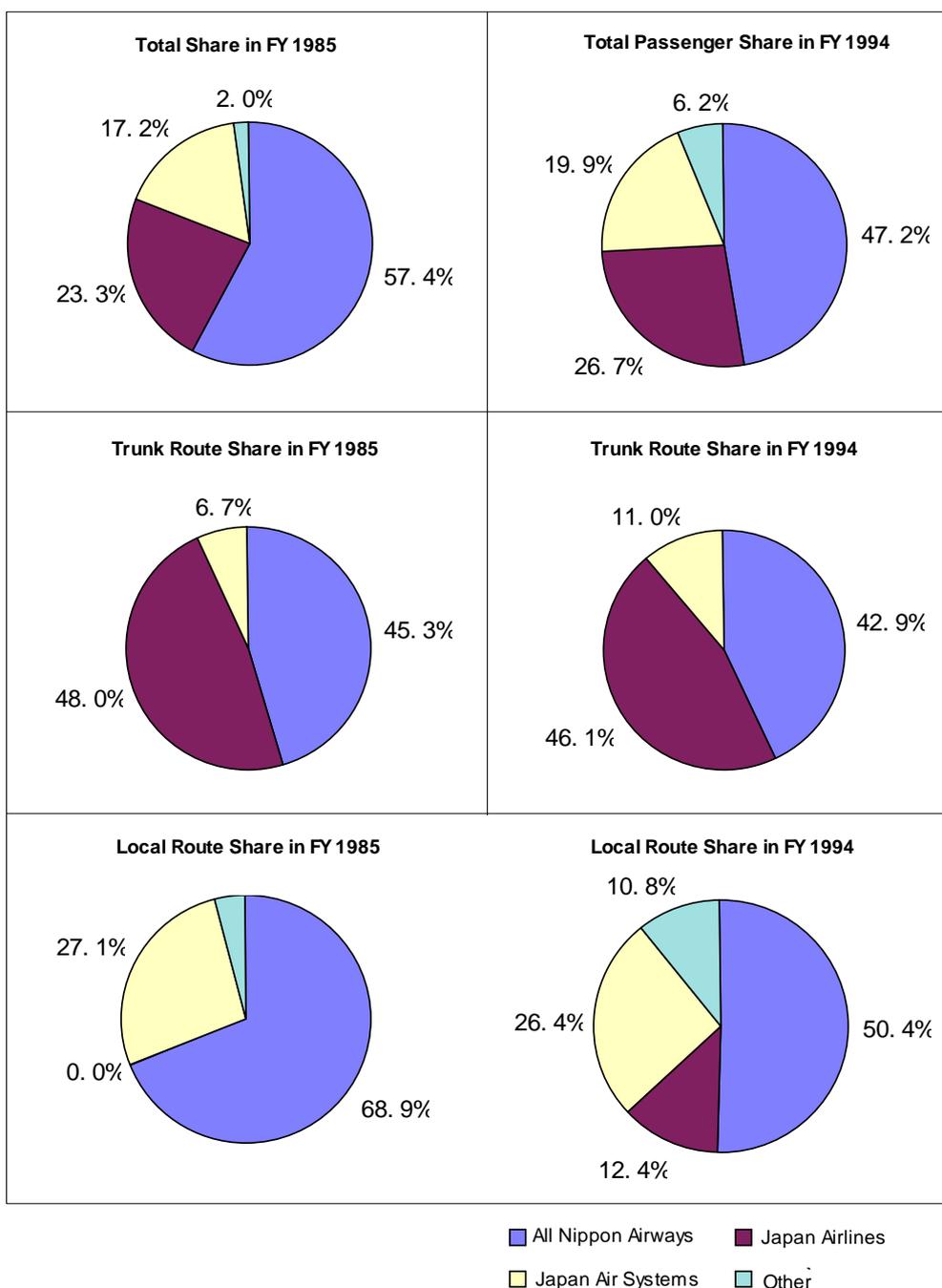
In September 1995, it was decided to introduce a new pricing system for domestic air fares in the form of an administrative guideline, while at the same time maintaining the system of approval by the Minister of Transport. The new pricing system, which was introduced in December 1995, permits carriers

to set fares at their own discretion within a given range, namely, between the ceiling price, which is set at the standard cost by the Ministry of Transport ("MOT"), and the floor price which is 25 per cent of the ceiling price.

Changes Accompanying Regulatory Reform

Fig. 3 contrasts the market share of the three major carriers in FY 1985 and FY 1994 in the domestic air passenger transportation sector (all routes). As a result of measures taken to promote competition since 1986 (Abolition of the 70.72 Regime), ANA's share has declined while those of JAL and JAS have grown in market shares.

Fig. 3 Domestic Air Passenger Transportation Share in FY 1985 and FY 1994

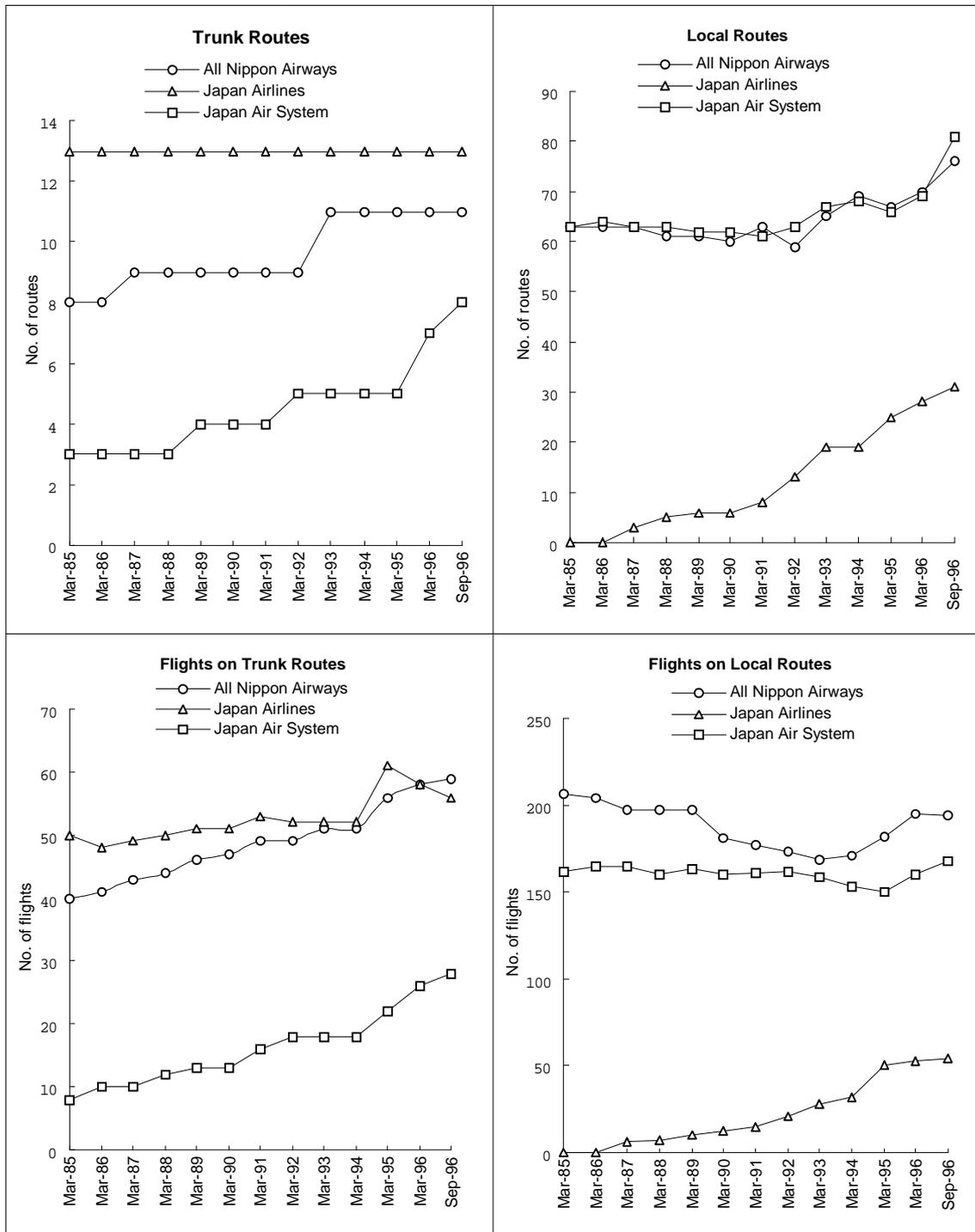


Source: Aviation Statistics (Japan Civil Aviation Promotion Foundation)

Fig. 4 indicates trends in the number of trunk and local routes, and trunk and local flights undertaken by the three major carriers between March 1985 and September 1996. The disparity in the number of trunk routes operated by each carrier has narrowed. Meanwhile, there has not been much change in disparity in the number of trunk flights when compared with the structure prior to the abolition of the 70.72 Regime. JAL shows high growth in the number of local routes and flights and it is clear that

the carrier has actively made inroads in the network of local routes since the abolition of the 70.72 Regime.

Fig.4 Trends in the Number of Trunk Routes, Local Route Flights carried out by the Three Major



Source: Materials provided by each carrier.

Allocation of new slots at Haneda Airport (Decision taken in March 1997)

Since take-off and landing slots are public goods and limited in number, MOT has delivered slots to carriers concurrently with the licenses for such routes that MOT has designated as a new route or as an increased flights route. This policy is from the viewpoint of constructing a national airline network.

Since there has previously been a limit in the number of slots available, there has been little chance for increasing flights or for entering into this industry. However, as for the 80 slots that will be added to the existing slots at Haneda Airport from the summer of 1997, MOT decided how to allocate these new slots in March 1997.

The concrete standards for allocation of new slots by MOT are shown as follows:

- 1) Additional slots to incumbent carriers will be divided into the following parts:
 - i) Slots accompanied by a license for routes which MOT designates.
 - ii) Slots without any route restrictions (carriers are free to choose the route).
(though passenger shares of routes from Haneda are taken into consideration when allocating new slots).
- 2) A total of 12 slots will be allocated to new carriers with a maximum limit of 6 slots for each new carrier. It is generally the new carriers that decide for which routes to provide service.
- 3) New slots will be effective for 5 years.

An Evaluation of Recent Regulatory Reform Efforts from the Viewpoint of Competition Policy

In evaluating regulatory reform after 1986, the following conditions are apparent:

- 1) Compared with the period prior to regulatory reform, there has been no significant change in the oligopolistic market structure made up by the three major carriers, and for which ANA occupies a major share.
- 2) As a consequence of background factors, such as monopolistic power on routes dominated by a single carrier, there was a case in which travel agencies were subjected to unwarranted pressure not to deal with the carrier's competitors.²

The regulatory reform, which purported to relax enforcement of entry regulations and to partially liberalize fare regulations, did not attempt a thoroughgoing liberalization of regulations on market entry and fare setting. They were confined to a limited scope; furthermore no change was made to the route licensing system that includes the clause for supply and demand control that is the very centerpiece of regulation.

It will be necessary to promote further regulatory reform and abolish regulations in order to stimulate more competition in the domestic air passenger transportation sector. The following are specific issues that should be considered in this regard:

- (1) Abolishing the clause for supply and demand control
- (2) Enhancing competition when there are restrictions as to the capacities of an airport

Even when systems are liberalized with respect to entry, if airport restrictions due to the capacities of an airport are in place, these constitute a physical restriction, and in effect render unrestricted entry into the sector impossible. For this reason, it is necessary to implement measures to enhance competition. Enhancing competition will also entail studying the possibility of reallocating existing slots.

According to one view, reallocating existing slots is not appropriate since it compromises the management stability of the carriers that must conduct management with a long-term perspective in mind. However, this view is not valid because, even for businesses requiring a long-term management perspective, there is no guarantee of future stability. Indeed, it is only normal for companies to make efforts to survive while being exposed to the threat of failure in the course of unrestricted competition.

Consequently, it is necessary to establish rules, in one form or another, when reallocating slots. When an airport is expanded and it then becomes possible to increase the number of slots, allocation of the increased slots will evidently become an issue. For this reason, it is also necessary to establish rules that will address this issue.

These rules should be highly transparent guidelines contributing to the promotion of competition among carriers while bearing in mind the following:

- a) The quota on existing slots should be made more flexible by attaching a term limit on the holding of slots. Also, measures should be implemented to prevent the entrenchment of vested interests in allocating slots.
- b) Measures should be implemented that allocate slots corresponding to the level of the carriers' efficiency (e.g. introduction of a competitive bidding system, etc.)
Furthermore, when relatively few slots are to be allocated, and when it is difficult for a new carrier or a small incumbent having only minimal flights (excluding subsidiaries of incumbent carriers, and hereafter referred to as new carriers), to enter the field or increase its flights, this should be carried out on the basis of an allocation corresponding to efficiency levels. In such a case, measures should be implemented to enable adequate competition between new carriers and incumbent carriers by allocating a portion of the slots to new carriers on a priority basis.
- c) The selection of the routes for the allocated slots should be entrusted to the unrestricted judgment of carriers.

The maintenance of "Lifeline" Services

In certain areas, some routes are essential to people's lives, and thus cannot be operated on a commercially profitable basis. However, if it is absolutely necessary to maintain these services, they should not be maintained by airline companies' internal cross subsidization, in which the basis of burden or a relationship between benefit and burden is opaque. "Lifeline" services which must be maintained from the viewpoint of public policy should be maintained with public support from national and/or local public bodies. When granting this type of public support, it will be necessary to introduce principles of competition in the selection of carriers to ensure that an inefficient carrier is not the recipient of such aid.

Clear-cut rules should be established at the outset to address the issue of maintaining "Lifeline" services if these are to be effected.

NOTES

- 1 Of the 80 slots that will be added to the number of slots at Haneda Airport, it has been decided that a total of 12 slots will be allocated to new carriers with a maximum of 6 slots for each new carrier.

- 2 A travel agency in Region A attempted to sell airline seats on the international charter flight of ANA's competitor. (ANA also operates a charter flight on the same route.) ANA informed the travel agency that it would no longer be allowed to sell seats for its scheduled flights on a route served only by ANA. The FTC found that ANA attempted to place restrictions on the travel agencies' sales of air tickets of ANA competitors. In March 1996, the FTC issued a warning to ANA that ANA had acted in a manner that hindered the business opportunities of a competitor, in possible violation of Section 19 of the Antimonopoly Act.

KOREA

Introduction

Economists argue that maximum reliance on competitive market forces and on actual and potential competition promotes efficient resource allocation. Applying this argument to the airline industry, the introduction of further competition could provide for more competitive prices and greater service to customers.

With the understanding that takeoff and landing slots are crucial factors to the airline industry, and given that airlines have encountered difficulties in obtaining desirable slots at congested airports throughout the world, discussions to alleviate the situation by exploring ways to introduce competitive aspects to the slot allocation mechanism are welcome. However, the pitfalls of blindly introducing market principles into the slot allocation mechanism should not be overlooked.

Slots and Competition

Proper market function will depend upon the ability of a new entrant to gain access to the airport and airport facilities, including take-off and landing slots, on terms equally competitive with other airlines. But the existing airlines' use of slots at congested airports could make new entry difficult either as a hub or a spoke.

Slot Allocation and Re-allocation mechanism

- (1) Most OECD member countries conform to the criteria for allocation and re-allocation of airport slots set out in the "IATA Scheduling Procedures Guide". Under the IATA rules, historical rights are acknowledged, and slots are allocated on a "first come, first served" basis. Slot swapping amongst airlines is permitted.
- (2) Under the "first come, first served" rule, it is difficult for a new entrant to obtain desirable slots, and even if an airline does obtain slots for new or expanded services at a congested airport, it may still be at a disadvantage compared with an incumbent airline. Even under the "use or lose" rules, since few slots are returned to the coordinator, the slot coordinator does not have enough new slots to award to new entrants.
- (3) As a means of promoting competition in the slot allocation process, the introduction of market principles, i.e. the buying selling, or leasing of slots in a "slot market" context could be theoretically considered.

Evaluation of using markets for slot allocation and re-allocation

- (1) The distribution of slots in a "slot market" can ensure economic efficiency because slots will be distributed to those airlines for which the demand (willingness to pay) is the highest.

- (2) However, it can permit airlines without immediate plans to bid for and obtain slots at a particular airport. Slots will be looked upon as an asset to be accumulated, and major airlines will have the incentive to hold more slots than they need. Major airlines will be able to hoard slots and lease out their excess slots rather than give up control of them to potential competitors.
- (3) The expected prevalence of slot leasing will in turn allow the airlines hoarding the slots to exercise much control over other airlines which do not have possession of slots. Interestingly, this expected behavior of major airlines would be rational given the uniqueness of the "slot market" in which the supply of slots is virtually constant unless infrastructural investment is implemented.
- (4) Another point to consider is the procurement of slots. If there is no further infrastructural development before the implementation of the new mechanism, i.e. the construction of a new airport, slots presently in use by incumbent airlines must be forcibly seized. For certain airlines this could lead to the discontinuation of only a number of certain routes, but for others this could lead to the reduction of a sizeable portion of its existing operations.

Concluding Remarks

- (1) Distribution according to IATA rules could act to block new market entry as airports become increasingly congested. Thus, as a means to resolve such problems, the possibility of introducing market principles could be explored.
- (2) However, under the "slot market" allocation and re-allocation mechanism, the major airlines will have strong incentive to secure and maintain their control of slots through rent-seeking, such as predatory pricing, alliances between incumbents, etc.
- (3) Furthermore, the introduction of a market-based slot allocation system ("slot market") could pose difficulties relating to the withdrawal of many of the slots already being used by incumbents as well as problems concerning the observance of existing Air Service Agreements.
- (4) Therefore, it is necessary to carefully analyze the short-term and long-term effects to the airlines and consumers and the feasibilities of the market-based system in the related countries.

Slots: Written Contributions

There are three international airports- Kimpo, Jeju, and Pusan International Airports. Among them, Kimpo International Airport, located in Seoul, is slot-constrained. When the New Incheon International Airport in Yongjong Island near Seoul is completed in early 2000, congestion problems are expected to be solved.

There is noise restriction in Korean airports. The air carriers are subject to noise charges according to established criteria.

The slots are allocated by mixed criteria of IATA rules and the local specific technical conditions. The local specific technical conditions prescribe that the airport operating time shall be between 06:00 and 23:00, the number of slots per hour be 45, etc. The terminal allocation criteria includes accommodation ability of the terminals, air carrier parking, passenger's convenience, etc.

As for the slot swap, in case an airline can not obtain the slot it needs, it asks for the data list of slots from the coordinator and makes an attempt to swap the slot it needs directly with the incumbent.

There is no market for existing slots, and the slots can not be leased by airlines. New slots are allocated on a first-come, first served rule.

Ground Handling Services (GHS)

Limitation of Entry

Entry into GHS business can be restricted for reasons limited facilities (space), flight safety, and security. Some GHS fields specially those of repair and maintenance repair careful evaluation of the past experience & technology, of the candidate GHS providers for the sake of flight safety. The government or the Airport Authority would be the ideal organizations for setting and applying the criteria for the number of participants and for entry. Before setting the criteria, the government or the authority can discuss and consent to the number of GHS providers and the criteria with members of the Airport Operation Committee and Airlines Organization Committee.

If there is competition in the entire GHS, the grandfathering rule would generate efficiency since competition would drive out the incompetent companies. After the inefficient companies are selected out, new entrants meeting the criteria could be selected either by bidding (auction) or by choosing the most qualified.

If there is no competition (because of limited space, etc.), regulation of tariff and quality of services is needed because the monopoly GHS firm has an incentive to charge a monopoly price at all times. For a monopoly GHS spot, a bidding auction is not ideal since the chosen monopoly firm would just transfer the bidding cost to customers.

If a monopoly, then who?

Vertical integration of airlines and GHS would be beneficial to consumers, in theory, if perfect competition exists in either the airline business or GHS business, because the competitive sector does not introduce a price distortion and then the monopoly sector cannot exercise an externality on the competitive sector. However, if a monopoly GHS firm can price-discriminate, then it has an incentive to charge monopoly GHS prices to other airlines. Therefore, the tariff should be regulated in a monopoly in some way. Even though the tariffs are regulated, it is still possible for the service provider (airline) to offer bad services to other airlines. This would be anti-competitive. In Korea, this is not much of a concern because there is competition in GHS services at major airports.

If the airport or the independent company offers GHS exclusively, it still has the incentive to charge monopoly prices but would be equal to all airlines in its services. The airport or the independent

company is more suitable for monopoly GHS than the airlines because of its equality of services. In Korea, prices and qualities of services are decided by the market through competition in GHS fields.

Ground Handling Services (GHS): Written Contribution

Entry into GHS business requires licenses from the Department of Construction and Transportation (DOCT). There are two firms, Korean Airline and Asiana Airlines, competing in GHS at major Korean airports. Self-provision by airlines is allowed in all GHS fields and does not need licenses or permission. The number of participants are not limited by law, but by supply & demand and the capacity of the airport. There is no more space to accommodate additional GHS firm, other than Korean Airlines and Asiana Airlines, at the Kimpo international Airport in Seoul.

The current criteria for the number of GHS participants is based on supply and demand and supply of GHS should not substantially exceed demand. The GHS candidates are evaluated by DOCT and chosen based on the following criteria: minimum capital of approximately U.S. \$550,000, minimum 5 certified technicians, minimum 1 person with at least 5 years of experience in aviation control, and equipment of required machineries for the service.

The airport operator, the Korea Airport Authority, does not operate GHS and is not involved in the authorization of GHS. The Hankook Airport Service Co. and Hankook Flight Co., subsidiaries of the dominant Korean Airlines, offers all kinds of GHS to itself and other airlines in almost all airports in South Korea. Competing Asiana Airlines also offers GHS to itself and other airlines through the Asiana Airport Service Co. in almost all airports.

There are 10 licensed GHS companies in South Korea as of April, 1997. There are 7 companies operating at Kimpo International Airport. Basically, subsidiaries of Korean Airlines and Asiana Airlines compete and cover most GHS at Kimpo International Airport, with others specializing in light planes and helicopters. Since self-provision is allowed, there are airlines operating its own GHS including Northwest Airlines, United Airlines, and Cathay Pacific Airlines. The cost of self-provision at Kimpo airport is quite high and most airlines use GHS of Korean Airlines and Asian Airlines.

There are no other restrictions on entry to GHS business, other than demand & supply and space limit. Foreign companies are allowed to offer GHS to other airlines as of January 1, 1997. The GHS tariffs are set by competition between the suppliers and are not regulated. However, the contracted tariff between the suppliers and customers is subject to post-reporting the DOCT.

Korean Airlines has been a monopoly in the airline industry and GHS business in Korea since the late 1960's. Asiana Airlines was allowed to offer air-transportation services and GHS since 1988 and has been competing with Korean Airlines ever since. Though the positive effects of the entry in air-transportation services have been written in many reports, the effect of the entry into GHS fields is hardly known and studied. Only one report of Korea Transport Institute (Directions for Deregulation of Transport and Tourism Industries) is implying a possibility of wasteful duplicative investment and diseconomies of scale in GHS, resulting from competition.

NORWAY

Airports

Who is the airport regulator? What are its main tasks?

The Norwegian Civil Aviation Administration (CAA) is responsible for regulating the operation of Norwegian airports. The CAA is an administrative body subordinated to the Ministry of Transport and Communication.

The main tasks of the CAA today are surveillance and control of the airlines, air-traffic services, airport services, navigational and electrotechnical services, and fire/rescuing services.

The Civil Aviation Inspection has so far been an integrated part of the CAA. In order to separate the surveillance/control functions from the operational tasks, the Civil Aviation Inspection will get a more independent role. All aspects of the regulatory role will in the future be taken over by the Civil Aviation Inspection, which probably still will be subordinated to the Ministry of Transport and Communication.

What is the prevailing ownership regime of airport infrastructure (private/public, national/federal/local)? Are there situations of mixed private/public ownership? Do airlines own significant shares in airports? Are airports within the same airport system usually owned and/or operated by the same entity ?

At present the Norwegian state, represented by the Civil Aviation Administration, owns 18 Norwegian airports. Of these, Oslo Airport at Fornebu is owned by Oslo Airport AS, and the CAA owns all shares in this company. In addition to these airports, there are 28 regional airports, currently owned by local municipalities. By 1998 all of these 46 airports will be owned by the Norwegian state and will be operated by the CAA as one airport system.

There are also 11 relatively small privately owned airports which are open to public flights. At one of these there is a three-parted ownership. The runway and surroundings are owned by the Norwegian state, represented by the Ministry of Defense. The control tower and technical installations are owned and operated by the state, represented by the CAA, whereas the terminals and parking lots are owned and run by a private company. This form of joint ownership is an exception to the Norwegian system.

The Norwegian state, represented by the Ministry of Defense also owns military airports. Some of these are open to civil flights. In the future, the responsibility of some of these airports will be taken over by the Civil Aviation Administration.

How are capacity expansions financed? Do public funds, subsidies or preferential loan conditions play a significant role?

Capacity expansions are financed by the Civil Aviation Administration through incomes from regular operation (user charges) and commercial incomes (concession revenues). The total costs of airport operation is about 2 900 million NOK.

The Ministry of Transport and Communication has recently proposed to give the CAA a fund of NOK 110 million per year for the operation of regional airports, whose ownership is about to be transferred from local councils to the state. Some of the airports are in such a condition that further investments are warranted.

Oslo Airport AS, owned by the CAA, is building a new airport at Gardermoen. According to the CAA there are no public funds, subsidies or preferential loans involved in this investment.

How is access to the market for airport capacity regulated? Is there a separation between the owners of airport infrastructure and the actual airport operators?

The Civil Aviation Administration represents the Norwegian state as the owner of 18 airports and also has the role as the operator of these airports. The CAA decides which of these airports are to be expanded. The CAA takes its decision based on information such as documented traffic data and proposals set forth by the 12 regions within the airport system.

According to the Air Navigation Act of June 1993, sections 7-11 and 7-5, anyone, including airlines, who wants to build an airport or make fundamental changes or expansions of its airport, has to apply for a time-limited license from the Ministry of Transport and Communication. The licensee is obliged to follow given regulations of airport services, collect any governmentally set taxes, let the airport be open for public flights, and may, within the scope of international regulation, set its own fees for using the airport. Operating international flights from the airport requires additional approvals related to customs, police, and passport control services.

***What are the main features of standard licenses for airport operation (e.g. fees payable to the licensor, service obligations, extent of exclusive rights by licensee, if any) ?
Are there several instances where several different companies are operating separate infrastructures within the same airport ?***

The Civil Aviation Administration is its own supplier of essential airport services, cf. question 1, ground handling services are operated by airlines, cf. the questions on ground handling, whereas other services supplied at airports is based on contracts with the CAA as a licensor, in some cases hiring out property on normal rental contracts.

The Competition Authority has been involved in several cases where the CAA's license practice has been questioned. The Competition Authority has also in some instances taken actions to prohibit the use of exclusive contracts and excessive entry fees, cf. the written contribution on Analysis, question 2.

What is the regulatory framework for airport charges (landing and take-off charges, aircraft parking charges, passenger charges). What is the degree of freedom of the airport operator in setting charges? Are charges set by a regulator? Are they cost-related? Is peak-load pricing allowed? To what extent do international treaties put constraints on the design of airport charges?

The regulatory framework for landing and take-off charges, aircraft parking charges and passengers charges is set out in Section 7-26 of the Air Navigation Act of June 1993 No 101.

The *Scale of Charges* is worked out by the airport operator, i.e. the Civil Aviation Administration (CAA). After a public hearing and possible modifications a proposal is sent to the

Ministry of Transport and Communication for approval. The CAA may deviate from the *Scale of Charges* and grant rebates. The user of the airport (aircraft operator) may complain to the Ministry on the CAA's decision on rebates and other disagreements. The complaint may also, under certain circumstances, be appealed to the King in Cabinet Meetings.

The total sum of airport charges and concession revenues is related to the total cost basis of the airport system operated by the CAA, but not necessarily to the costs of the individual airport. Peak-load pricing is allowed, but has so far not been used.

The *Convention on International Civil Aviation* is a complete constraint on the design of charges. The CAA also takes appropriate notice of the *Recommendations* by the ICAO on Airport Charges. Hence, the design of airport charges is fairly within the framework recommended by ICAO.

Slots

Which, if any, airports are slot-constrained for at least some period of the day ?

The Oslo Airport at Fornebu is the only airport in Norway which is slot-constrained. It is a fully coordinated airport, in the terminology of Council Regulation (EEC) No 95/93, except Saturdays and Sunday morning. At Oslo Airport slots are thus allocated the whole day. Maximum capacity of 36/40 movements per hour is only met on weekdays in the peak-hours between 07.00 - 11.00 a.m. and 2.00 to 9.00 p.m.

The opening of the new Oslo Airport at Gardermoen on 4 October 1998 will lessen problems of congestion considerably, with its two runways and a capacity of 60 movements per hour. It is yet not decided whether Gardermoen will be given status as a (fully) coordinated airport for some periods of the day.

What is the nature of the binding restraint, e.g., noise restriction, terminal constraints?

The binding restraint is the capacity of the runway. Maximum regular capacity is as a main rule defined to 36 movements per hour. During morning peak-hours between 07.00. and 09.00 capacity is set at a total of 80 movements per two hour, between 11.00 and 12.00 capacity is 30 movements.

Occasionally, on fine summer days the Oslo Airport has managed to handle 48 movements per hour. There may be some minor capacity problems on baggage handling and aircraft parking/movements.

Approximately, what is the distribution of existing slots among airlines at each slot-constrained airport ?

In the winter season of 1995, the slots were distributed among airlines as indicated in the table below

Allocated slots at Oslo Airport, Fornebu, winter season of 1995

		average per day
Scandinavian Airlines System (Scandinavian)	SAS	47,6 %
Braathen SAFE (Norwegian)	BU	29,3 %
Wiederøe (Norwegian)	WF	3,9 %
Other airlines	Other	<u>20,2 %</u>
		100 %

How are slot allocation decisions made ?

Norway has given the Oslo Airport AS at Fornebu status as a «*fully coordinated airport*» and allocation decisions thus have to be in line with Council Regulation (EEC) No 95/93.

There is a slot-coordination-agreement for Fornebu entered by the Civil Aviation Administration, Scandinavian Airlines Systems (SAS) and Braathens SAFE. The slot coordinator is an employee in the airline SAS, and the coordination is done without costs for the Norwegian Civil Aviation Administration or participating parties.

The coordinator's proposals are approved by the Civil Aviation Administration. Decisions on slot allocation is legally treated in line with ordinary Norwegian procedure for official decisions interfering private parties. Written complaints are thus first treated by the CAA and their decision may be appealed to the Ministry of Transport and Communication.

The slot allocation data system is accessible for all parties. The coordination committee presently includes representatives from Braathens SAFE (chairman), SAS, Wiederøe, Air Stord (small airlines), Swiss Air (foreign airlines) and Oslo Airport AS.

What are the criteria by which slot allocations are made ?

Slot allocations are based on Council Regulation (EEC) No 95/93 and IATA-coordinated rules. Slot allocation decisions are thus based on grandfather rights. It is also based on inter alia priority of scheduled flights to charter flights, priority of increasing the number of days a flight is flown, and priority of longer flights to shorter flights.

How does (do) the decision-maker(s) relate to the airlines ?

The slot coordinator is an employee in the airline SAS. This person proposes a slot allocation plan which is approved by the Civil Aviation Administration. The CAA is a body under the Ministry of Transport and Communication. The Ministry administers the Norwegian state's 1/7 stake of the airline SAS.

How are slot swaps implemented (scheduling committees, clearance co-ordinator) ?

Slot swaps are implemented through the airlines and the coordinator.

To what extent are grandfather rights actually enforceable ?

Within the restrictions laid down in Council Regulation (EEC) No 95/93, grandfather rights are 100 per cent enforceable. The route must thus have been operated for at least 80 per cent of the time in the previous season, unless reasons listed in Council Regulation 95/93 Article 10.5 can justify a lesser usage.

Is there a (monetary or non-monetary) market for existing slots ? In the event, are trades frequent ?

There is no market for existing slots.

Can slots be leased by airlines ?

No, slots can not be leased by airlines.

What safeguard regulatory mechanisms prevent improper use of slots by incumbents ?

Mechanisms laid down in Council Regulation (EEC) No 95/93, the slot coordinator and the Civil Aviation Administration also are in daily contact.

How are new slots allocated ?

New slots are allocated according to Council Regulation (EEC) No 95/93. Existing airlines may have 50 per cent of the new slots whereas the other half may be given to «new entrants», i.e. airlines with less than 4 flights on the airport the day in question.

To whom do existing slots ultimately belong ?

There has been no occasion whereby this question has been highlighted. Existing slots belong to the operator of the airport. At Fornebu and Gardermoen the operator is Oslo Airport AS, which is owned by the CAA.

Ground Handling Services***What is the regulatory and market environment for the provision of ground handling services?***

The Norwegian Civil Aviation Administration (CAA) regulates the suppliers access to this market. Self-provision by airlines is the rule at all Norwegian airports except at Oslo Airport Fornebu. At Oslo Airport Fornebu the number of suppliers are limited to the two domestic and dominant airlines, SAS and Braathens SAFE. These airlines are the only ones which are allowed to do self-handling at this airport. This policy may change when Oslo Airport Gardermoen opens at 4 October 1998. The airlines will as a main rule be allowed to do self-handling at Gardermoen. It is also considered to use a tendering procedure for providers of handling services to third parties.

- a) *What are the criteria by which self-provision by airlines is allowed or not allowed?*
- b) *What are the criteria by which the number of participants is limited?*

The number of airlines which executes self-provision or provides others, is limited at Oslo Airport Fornebu due to capacity constraints and security reasons.

- c) *What are the criteria by which the identity of participants are chosen? Who makes the choice?*

The Norwegian Civil Aviation Administration has chosen the two domestic airlines to provide the services of historical reasons.

To what extent is the airport operator involved in service provision?

The airport operator is not involved in handling at any airport.

To what extent is the dominant airline involved in service provision?

The two dominant airlines are the only airlines providing these services at Oslo Airport Fornebu.

Is access to these services by independent operators and/or airlines free?

No, it is regulated by the Norwegian Civil Aviation Administration.

Approximately, how many companies are currently providing handling services in major airports?

It varies from two to three airlines.

Does self-provision by airlines play a significant role?

Yes, except at Oslo Airport Fornebu where SAS and Braathens SAFE are the only airlines which execute self-provision and provide other airlines.

What are the criteria, if any, for restricting access to ground handling services?

The access is restricted due to capacity constraints and security reasons.

Are ground handling tariffs regulated?

No, they are not.

Analysis

What has been your experience in changing the regulatory environment, e.g., what competition issues arose, what was the outcome of the change?

The Norwegian Competition Authority has worked mainly with issues regarding deregulation of air transport, access to ground handling markets and stipulation of airport charges. In this part of the analysis we will deal with our experience in changing the regulatory environment regarding stipulation of airport charges and access to ground handling markets.

Airport charges

The Norwegian Civil Aviation Administration (CAA) works out a proposal regarding the Scale of Charges for each airport operated by the CAA. This regards the major airports in Norway. After a public hearing and possible modifications, the proposal is sent to the Ministry of Transport and Communication for approval. The CCA may deviate from the Scale of Charges and grant the user of the airport a discount. The user of the airport may make a complaint to the Ministry of Transport and Communication against the CAAs decision regarding the discount or other practices of charging rules in the Scale of Charges.

The CAA and the Ministry of Transport and Communication consider the airports operated by the CAA as one airport system. The airport charges (and the concessions revenues) are stipulated to cover the total costs of the airport system. The traffic at some of the airports is so scarce that the total income from airport charges and concessions revenues does not cover the costs of operating these airports. This deficit is covered by the surplus from other airports.

The Norwegian Competition Authority has urged the Ministry of Transport and Communication to change this system of cross-subsidies between airports. The Competition Authority has pointed out that airport charges should be stipulated to reflect the costs of airport facilities and services, including externalities such as air and noise pollution. The level of charges should be stipulated to reflect the differences in demand for the services in various periods during the day. The use of peak-load pricing may contribute to more efficient use of the airport and airport facilities. The deficit created at airports with scarce traffic should be covered by financial transfers directly from the state and not from airports making a surplus.

The Ministry of Transport and Communication has proposed to the Norwegian Parliament that the Government can buy services directly from airports which cannot provide the service level wanted by the Government on commercial terms. If this proposal is accepted by the Parliament, the need for cross-subsidies to uphold the service level will be reduced.

Ground Handling Services

The Norwegian Civil Aviation Administration (CAA) does not provide ground handling services at any airport it operates. The CAA regulates the suppliers' access to this market. The domestic air transport market is dominated by three airlines, SAS, Braathens SAFE and Wideroe's Flyveselskap. These airlines are self-provided with ground handling services at most of the airports except at Oslo Airport Fornebu where Wideroe's Flyveselskap is not allowed self-handling. The fact that the dominating airlines are self-provided at airports outside Oslo, leaves very little commercial room for an independent provider of these services. There is little demand for services from an independent provider when the

three major airlines are handling themselves. This is not the situation at Oslo Airport Fornebu where SAS and Braathens SAFE are the only providers of ground handling services and where there is commercial room for a third participant.

The Norwegian Competition Authority has advocated that the CAA and the Ministry of Transport and Communication should let other providers of ground handling services than SAS and Braathens SAFE have access to the market at Oslo Airport Fornebu. The Competition Authority's point of view is that access to the market should be limited only when it is necessary due to capacity constraints and security reasons.

In 1995 the CAA sent a proposal for handling policy guidelines on a hearing. The guidelines will, when implemented, still restrict access to the market at major airports but will to a further extent than today allow self-provision of ground handling services by the airlines. They will also make it possible for at least one independent provider of ground handling services to operate at the Oslo Airport Gardermoen when it opens at 4 October 1998. In addition, there will be at least two providers of services at other major airports. These providers will probably be airlines which also will handle themselves as well as third parties.

The guidelines are still not implemented. This is due to the CAAs and the Ministry's work with the implementation of the Council Directive 96/67/EC of 15 October 1996 on access to the ground handling market at Community airports. This work will result in a proposal for regulations which may result in a freer access to this market at Norwegian airports.

Have you had specific cases that would be of general interest ?

Access to airports for car rental firms

The Norwegian Civil Aviation Administration (CAA) is the operator of state-owned airports and decides who are to be allowed to perform services and/or rent property at these airports. On four occasions the Competition Authority has dealt with the problem for car rental firms getting access to parking and barrier facilities at Norwegian airports.

In 1979 and 1983 a total lot of four car rental firms complained to the Price Directorate that they had been denied access by the CAA to three major airports. Prior to the CAA's decision there had been a tender and the number of winning firms had been limited to 4 at all three airports in question. The Price Council made a decision prohibiting the CAA to deny access for the complaining firms. According to the Price Council limitations on such facilities should be regulated individually at each airport and not be set at a uniform number for all three airports. The Price Council also found the entry fee excessive and entry deterring. The high level of the fee and commissions would further contribute to an upward pressure on prices paid by consumers renting a car at airports.

Following these cases the CAA in 1985 put forth new guidelines regulating access for rental car firms at 3 major airports and asked for a prior approval from the Price Council. The guidelines were not approved on the ground that they still maintained a uniform rule of no more than 5 car rental firms at each airport and still had an admission fee and commission which the Price Council already had found to be too high in the previous specific cases.

The Price Council stressed that the CAA should see to it that as many companies as possible may compete on car rental services. The way the actual limitations and other conditions were set, the guidelines could have a detrimental effect on competition.

Access to ground handling services at Oslo Airport

Since 1976 the company AS Norving had operated regular flights and air taxi services at Oslo Airport Fornebu. From 1986 the company had 9 movements per day at Oslo Airport. Norving possessed aircrafts with a capacity of 16-34 seats and transported about 16 000 passengers per year, i.e. 0.35 per cent of the passengers at Oslo Airport.

In 1986 the Civil Aviation Administration would not allow Norving to continue its self-handling. Norving was forced to either buy handling services from the airlines SAS or Braathens SAFE or to do self-handling at a more distant and smaller terminal. To buy handling would in Norving's opinion increase their costs by 100 per cent. To move to the less central terminal would increase costs with NOK 1,5 million. Furthermore this terminal would further not have enough capacity to serve Norving's flights.

The Price Council found it unreasonable under the prevailing circumstances to deny Norving to continue their practice of self-handling. The alternative at the other terminal constituted no real alternative and a handling agreement with SAS or Braathens SAFE would give these airlines a competitive advantage. In the opinion of the Council the denial of an existing handler was more severe than to exclude an entrant handler. The Council decided to prohibit the CAA to deny Norving continued handling.

This case also highlighted questions on the jurisdiction of the Price Council regarding handling services. According to the Price Council there was no doubt that ground handling services are part of an airport's regular commercial activity. The Price Act¹ encompasses commercial activities of any sort, including commercial activity performed by an official administrative body. The Council also concluded that there was a business relation between the CAA and Norving.

Operation of telephone cabinets at civil state-owned airports

In September 1994 the Norwegian Competition Authority prohibited the Civil Aviation Administration (CAA) to enter into an agreement giving a firm exclusive access to install and operate telephone cabinets at civil airports owned by the Norwegian state. Limitations on the number of operators could only be allowed when it would be indefensible to have more than a certain number of firms operating at the specific airport in question. The decision was appealed to the Ministry of Administrative Affairs, which rejected the complaint from the CAA.

Prior to April 1994, the state-run Norwegian company «Televerket» had been operating telephone cabinets payable with coins at the airports, whereas the private company 3C Communication had run phone cabinets payable with cards. On 1 April 1994 the CAA entered into an exclusive agreement with Televerket.

Prior to the exclusive agreement the CAA had entered into protracted negotiations with several companies. The process was not an open tender giving predefined descriptions of the demands and with simultaneous bids from the parties. The CAA decided to have only one commissioner at all 19 airports. It was never argued that constraints on space warranted this.

1 Replaced 1 January 1994 by the Competition Act

The CAA demanded a commission (“royalty rate”) of the revenue from telephone calls. The Competition Authority was worried that the CAA maximised its profit by establishing a de facto monopoly at the airports. Televerket’s call rates at airports already exceeded the rates of their ordinary public call boxes by 50 per cent.

The relevant market was considered to be telephone cabinets at each airport. At the time of the Competition Authority’s decision, mobile telephones were not as wide-spread in Norway as they presently are.

POLAND

General information on airports in Poland

According to the provisions of the Air Law, the Minister of Transport and Maritime Economy (hereinafter referred to as “the Minister”) is responsible for the regulation and supervision of civil aviation in Poland (including airports). Those functions are performed by the Minister with the assistance of the General Inspectorate of Civil Aviation and the Polish Airports State Enterprise, as specified in relevant executive orders.

The Minister, inter alia:

- i) issues permissions for establishing of an airport and closure thereof and for that purpose he establishes the conditions and the relevant procedures;
- ii) establishes the rules for the Polish state register of airports,

Airport infrastructure is owned by the State. Airports are operated by the Polish Airports State Enterprise and, in the case of regional airports, by commercial companies composed of the local authorities and businesses as well as the Polish Airports States Enterprise. A principle prevails that airlines do not have shares in companies operating airports in order to avoid any potential infringements of Article 15 of the Chicago Convention. There are no airport systems in Poland at that moment.

Expansions of the airports are financed with the central and local budgets; operators of the airports also participate in the expansions mainly with regard to terminals and other land side elements of the airports.

In order to operate an airport, an entity has to obtain a concession (licence) on the basis of the Economic Activities Act.

The concession specifies the main conditions under which the airport must be operated, including the service obligations and appropriate financial and other means to be secured to operate the airport. The principle is that only one company can operate the airport as a whole but there are airports where other companies are licensed to operate other services provided to the airlines, such as ground handling, fuelling etc.

The airport operator establishes airport charges himself and submits them for approval of the Minister (according to the conditions of the concession). The Minister examines the proposed charges having in view the provisions of Article 15 of the Chicago Convention and ICAO Document Statements by the Council to Contracting States on Charges for Airports and Air Navigation Services.

Slot allocation

There are eight slot co-ordinated airports in Poland: Warsaw-Okecie, Gdańsk-Rebiechowo, Szczecin-Goleniów, Poznań-Ławica, Wrocław-Strachowice, Katowice-Pyrzowice, Kraków-Balice and Rzeszów-Jasionka.

The basic reason of the limited availability of slots is the capacity of the passenger terminals. In the case of one airport the availability of the air traffic control services limits slots.

Slots at the Warsaw airport are distributed in the following manner: LOT Polish Airlines - 63 per cent, Deutsche Lufthansa - 9 per cent, British Airways - 3 per cent, SAS - 3 per cent, Delta - 3 per cent, KLM - 2 per cent, other airlines - 17 per cent; at the Kraków airport - LOT Polish Airlines - 63 per cent, AUA - 14 per cent, Eurowings - 8 per cent, British Airways - 6 per cent, other airlines - 9 per cent; at the Gdańsk airport - LOT Polish Airlines - 70 per cent, SAS - 16 per cent, other airlines - 14 per cent.

The Minister issued Guidelines on slot co-ordination at Polish airports based on the relevant IATA recommendations and the EU Council Regulation No. 95/93 on common rules for the allocation of slots at community airports. According to them, The Minister appoints a slot co-ordinator for the Polish airports who shall observe the provisions of the Guidelines including the rules of objectivity, impartiality and professional competence. The capacity of each airport is established by the airport operator independently and submitted to the slot co-ordinator in the form of a report. Slots are allocated on the basis of the data included in such report. The airport operators do not take a direct part in the slot allocation process; it is the slot co-ordinator who prepares and forwards to each airport the Notice of Airport Capacity (NAC) for each season; simultaneously, NACs are forwarded to the IATA Secretariat. In the process of slot allocation all airlines have equal rights to obtain slots within the airport capacity on the basis "first come, first served". The rule of grandfathering is also observed.

The slot co-ordination is performed with the use of a computer system, taking into account the following elements:

- time limits co-ordination (every 60, 30 or 15 minutes depending on the airport),
- the number of landings in the time limit,
- the number of take-offs in the time limit,
- the number of parallel landings (within the period of five consecutive minutes),
- the number of parallel take-offs (within the period of five consecutive minutes),
- the number of landings/take-offs of wide bodied aircraft,
- the number of landing and departing passengers during one hour.

No airline has any influence on the establishment of the capacity of an airport. The slot co-ordinator is the airline employee, which is in line with the IATA recommendations.

The slot swaps are possible on the basis of voluntary arrangements between the airlines concerned. The slot co-ordinator is merely an observer in the process of slot swaps.

Each airline which has utilised a specific slot in a defined part of a season has a right to obtain the same slot for the same part of the next season. No limitations apply except for the real utilization of the slot allocated.

There is no market for existing slots. Slots are not subject to sale/purchase contracts; only slot swaps are permitted.

There is no possibility of leasing slots. A slot is allocated to a specified airline. When an allocated slot is not utilized, it has to be returned to the slot co-ordinator for his disposal.

The actual use of slots is monitored. In case the utilisation of a slot is less than 80 per cent in a season for which it was allocated, such slot is not subject to grandfathering rights with regard to a specified airline in the next season.

In case the capacity of an airport has been expanded, the new slots are added to the overall pool of slots available to airlines subject to the limitations as provided for in the EU Council Regulation No. 95/93 to take account of the interests of the new entrants.

A slot is allocated by the co-ordinator for a specified period of time and for the specified air services. The number of slots available results from the parameters of airport capacity established by the airport operator in co-operation with other authorities concerned which function at the airport.

Ground Handling Services

Ground handling services can be provided to airlines by an entity which is in possession of a licence issued to it by the Minister of Transport and Maritime Economy on the basis of the Economic Activity Act. A licence can be issued to an entity which has appropriate qualifications (from the safety point of view) and is in a position from the technical, financial and economic point of view to satisfactorily perform ground handling services. The applying entity has to be effectively controlled and substantially owned by Polish nationals. Currently such entities are separate from the airlines. The airlines, however, are allowed to self-provide certain elements of ground handling i.e. ground administration and supervision, passenger handling (check-in) and baggage handling (check-in). There are no major constraints to enter the ground handling market and obtain a licence (except for the conditions to be fulfilled as specified above). In the case of small airports, the number of ground handling providers is limited having in view the economics of their operations and the necessity to ensure the provision of the services that satisfy the airlines needs.

In the case of certain airports the airport operator is entitled to provide ground handling services. It can be licensed to do so if it meets the criteria referred above.

At present, the dominant airline does not provide ground handling services except for self-provision of three elements of ground handling services as specified above.

The access to ground handling services is allowed for any entity which meets the criteria specified above and obtains a license.

Generally one entity provides ground handling services at an airport, although there are airports where more than one company is licensed to do so (i.e. a ground handling company and the airport operator).

Self-provision by airlines (with respect to categories above-mentioned) at Warsaw airport plays a rather significant role. In case of other airports it is insignificant.

As mentioned in point 4 above, there are no major constraints to enter the ground handling market. An applicant has to meet the criteria discussed above; in the case of small airports the number of the service providers can be limited due to the reasons mentioned above.

There are no specific regulations on ground handling tariffs. The licence provides for the submission of tariffs to be applied to the Minister of Transport and Maritime Economy (as the licensing authority).

General observation on the liberalization of ground handling services

The liberalization of international air services and their main element the traffic rights should also include the liberalization of so called soft rights (which include inter alia ground handling services).

SWEDEN

Airports

The two largest Swedish airports, Stockholm-Arlanda and Gothenburg-Landvetter airports (according to number of passengers) as well as a number of smaller regional airports are owned by the state and operated and managed by the Swedish Civil Aviation Administration (CAA). CAA is also in charge of the management of civil aviation at five military airfields. Altogether the Swedish CAA manages 19 airports. The Swedish CAA is a separate government authority and its areas of responsibility include, inter alia, airports, air navigation services, flight safety, security and air transport policy matters.

In addition there are a number of smaller airports owned and operated by municipalities. A few of them are comparable in size with the smaller state owned airports. Finally there is one private airport of significance owned by the aircraft manufacturer SAAB. In total, scheduled air services are pursued at about 40 airports in Sweden. Stockholm-Arlanda airport is the main hub connecting a large number of domestic and international air services.

Capacity expansions for state owned airports are not funded out of taxation revenue but the Swedish CAA has to raise its own finance for infrastructure in the aviation sector. The Swedish National Franchise Board for Environment Protection has to be involved as a review body for significant environment-related capacity expansion projects. Greater capacity expansion projects has to meet the approval of the Swedish government.

It might be of interest that a national plan for transport and communications is underway. The plan has in view a transport system that is adapted to the environment and which also promotes traffic safety, welfare, sustainable growth and regional balance, as well as competitiveness of trade and industry. The Swedish CAA has in this context emphasised the importance of a national and coherent airport system.

Airport charges

Airport charges are regulated by the CAA with a price ceiling set by the government related to inflation. CAA may raise its charges for operation services to a level not exceeding 80 per cent of the net price index (NPI) since 1993. The charges are set with a systemic approach for the CAA airports as the operations and finances of a given airport in the system also depend on what traffic is generated at other places in the system. Yet each airport has its own charging system, but deficits can be covered by surpluses that arise elsewhere in the total airport system.

Peak-load pricing is allowed, has been studied but has not been implemented for several reasons. In 1994 CAA introduced differentiated landing charges based on the noise levels of various aircraft. The Swedish CAA is striving to minimise the environmental impact of civil air traffic at a level that is accepted by the public as legitimate when compared to the advantages of air transport to society. In this endeavour CAA is promoting further development of noise and emissions-related charges in domestic as well as international fora such as ICAO. Sweden is planning to introduce emissions-related charges as from 1998.

A clause on imposition of charges is generally included in Sweden's bilateral Air Services Agreements. The substance of such clause is normally that user charges have to be non-discriminatory. Air navigation facility charges have to be reasonably related to the cost of service rendered to the airline concerned and levied in accordance with the relevant guidelines issued by ICAO. As of 1 January 1997 Sweden is a part of the common en route charge system within EUROCONTROL.

Slots

Stockholm-Arlanda - the only fully coordinated airport in Sweden

Stockholm-Arlanda airport is the only Swedish airport which is fully coordinated in accordance with Council Regulation (EEC) No 95/93 due to scarce runway capacity. The coordinator has serious problems allocating slots according to the requests from air carriers at Arlanda airport during weekdays about 06.30 to 09.30 in the morning and about 16.30 to 19.00 in the afternoon (local time).

As regards the distribution of existing slots 71,5 per cent of total slots has been allocated to five air carriers at Arlanda airport. Of total slots, 46,1 per cent has been allocated to the carrier holding most slots. The four carriers following in order hold 9,9 per cent, 7,5 per cent, 5,6 per cent and 2,6 per cent respectively of total slots. The numbers are based on allocated slots for the week 15-21 September 1997 for which a total of 5 410 slots are allocated to 59 carriers.

Slot allocation and the coordinator

Slot allocation decisions are made in accordance with Council Regulation (EEC) No 95/93 by the coordinator. The coordinator applies the recommendations and principles in IATA's Scheduling Procedures Guide (SPG), however without prejudice to the provisions in the EEC Regulation. As of 1 January 1996 the coordinator of Arlanda airport is an incorporated association named ACS, replacing the air carrier SAS as coordinator. Two people work for ACS on full time basis. ACS members/owners are a number of Swedish air carriers financing 50 per cent of the operating costs of ACS. The airport covers the remaining 50 per cent and a representative of the airport participates as an observer at ACS board meetings. A coordination committee is set up to assist, in a consultative capacity, the coordinator in accordance with article 5 of Council Regulation (EEC) No 95/93.

In summary the main principles for allocation of slots are "grandfather rights", "use it or lose it", transfers by an air carrier of allocated slots from one route to another or exchange of slots between air carriers. The coordinator shall allocate 50 per cent of newly created slots, unused slots and slots which have been given up by carriers to new entrants, unless requests are under 50 per cent.

Slot exchanges

Slot swaps are implemented during the global IATA slot conferences taking place twice a year. In addition slot swaps may take place any time after conferences and during season. However, swaps have always to be cleared by the coordinator. Slots can not be sold, unilaterally given away or leased, but monetary remuneration is not explicitly forbidden in connection with a swap. It is not known to what extent money or other kinds of compensation are involved when carriers agree on slot swaps.

Safeguards

Improper use of slots by incumbents can be raised in the coordination committee. If the problems cannot be resolved the Swedish authorities may provide for mediation in accordance with article 8 in Council Regulation (EEC) No 95/93. It should be noted that the application of the provisions of Council Regulation (EEC) No 95/93 are without prejudice to the competition rules on the Treaty establishing the EEC and in particular articles 85 and 86 of this treaty.

Ground Handling Services in Sweden

There are basically three models applied for the provision of ground handling services in Sweden, all dependant on who is the airport operator and the size of the airport.

Airports owned by local municipalities

At airports owned and operated by local municipal government which are all in the category of handling less than 300 000 passengers, ramp services are always a monopoly of the airport operator. Passenger services can normally be provided by the airline themselves. In some cases there is also a monopoly on passenger services provided by the airport operator. These airports are too small to be able to support a separate handling operator, and third party handling is therefore often supplied by the major airline operator at the airport.

Airports operated by the Swedish CAA

All large airports in Sweden as well as about half the number of the smaller commercial airports are operated by the Swedish CAA. At these airports a CAA policy governs the provision of handling services. This policy basically follows the new EU directive on ground handling services.

Ground handling services at smaller airports

An airport with less than 2 mill. passengers or 50 000 tons of freight per year fall into this category. At these airports the airport will designate a sole supplier for ramp services, the sole supplier can be the airport operator himself, an airline or a specialised handling company. The airports operator has the first choice to provide these services. About 14 of 17 regional airports in the CAA group do ramp handling themselves. If the airport operator decides against supplying these services themselves, a provider should be selected in an open selection process, similar to a purchasing process. The airport operator will in such a case supervise the pricing schemes applied by the handling agent.

Passenger services are open to self handling to all airlines at all the Swedish CAA airports, provided that there is sufficient space and checkin desks are available. Third party handling is normally provided by the dominant selfhandling airline or the appointed ramphandling agent, such as the airport operator.

Ground handling services at larger airports

In Sweden there are only two airports that fall into the larger category Stockholm-Arlanda and Göteborg-Landvetter. Such an airport would have more than 2 mill. passengers or more than 50 000 tons of freight handled per year. At these two airports the following scheme is applied.

Passenger services are open to self handling operations provided there is enough space available. At the moment only a few airlines have opted for this solution. Apart from self handling there is a free choice between appointed third party handlers available at these airports. The airline SAS, LFV Handling AB (a subsidiary company to the CAA) and Servisair are appointed agents at the airports for both passenger and ramp handling services. The Swedish CAA encourages competition in the handling business at its larger airports.

On the ramp an airline can choose between the appointed handling operators. Self handling is generally not allowed, due to space and security restrictions. SAS as the dominant airline is however allowed by tradition to do their own handling on the ramp.

There has been few complaints so far regarding the restrictions on selfhandling on the ramp, probably due to the fact that prices are extremely competitive due to the availability of three agents. However, some applications for selfhandling on the ramp are expected from cargo operators and integrators, where there still might be a cost advantage with self handling. The EU directive is also rather generous on the issue of self handling on the ramp. The process to implement this directive in Sweden is underway.

The issue of independent operators at larger airports

It is the Swedish CAA's aim to have an independent operator available at its larger airports to serve airline customers. The CAA define an independent operator as being free from major influence of:

- the airport operator
- any airline having operations from the airport
- or a body controlled by or indirectly controlled by the airports operator or an airline operating at the airport.

Other issues

At airports with a competitive handling environment handling tariffs are not regulated.

It is the Swedish CAA's view that due to space constraints, safety and security reasons it is practical to limit the numbers of handling operators at an airport. From a competitive point of view there is no need to have more than three providers of third party handling services, especially as there is normally a dominating airline available at most larger airports in Europe, which normally also is a service provider.

At airports with passenger volumes below 5-7 mill. passengers it is probably not feasible with more than two suppliers, in order to maintain a viable business for the handling agents leading to long term benefits for airlines.

The Swedish CAA believes it is imperative that the power to decide on how many agents there should be at an airport is held by the airport operator.

THE FOLLOWING TEXT IS AN ABSTRACT FROM "COMPETITION ON DEREGULATED MARKETS" AN ENGLISH SUMMARY OF A REPORT FROM THE SWEDISH COMPETITION AUTHORITY

5 Airlines

5.1 Deregulation

Swedish domestic civil aviation was deregulated July 1st 1992. Prior to this the national carrier SAS had a monopoly on the primary routes, i.e. those routes that were part of domestic route network of the company. The monopoly position was, however, not legally determined but rather based on praxis. The law stipulated that for security reasons a permit that had to be authorised by the government was required to operate scheduled flights. In addition, it was stipulated that domestic air transport should only be operated by companies controlled by Swedish citizens - the prohibition on cabotage - and that SAS had preferential access to international routes. The conditions governing the rights granted to SAS and the domestic airline company Linjeflyg included a clause on price regulation, which meant that prices must be approved by the Swedish Board of Civil Aviation.

The deregulation of 1992 meant that airline companies were able to determine their own prices, but the requirement for a permit to operate each individual route remained. The basic rule was, however, that all Swedish airline companies who wished would be able to operate a certain route, and that no company would have preferential rights.

The aim of deregulation was to create a more "consistent" transport policy i.e. a policy where different types of transport would be created equivalently. In addition, the view was that deregulation would favour consumers by increasing customer orientation and efficiency, increasing flexibility and provide better developmental opportunities for the industry. An additional reason for deregulation was that the new market situation would strengthen the competitiveness of Swedish companies prior to the forthcoming European deregulation.

The level of expectations was high. The dramatic decline in the number of passengers at the beginning of the 1990s due to the recession meant, however, that expectations that new entries on the market would increase supply and develop new routes rapidly proved to be unrealistic.

5.2 Development after deregulation

The number of passengers travelling by domestic flights grew rapidly between 1965 and 1990, from 0.75 million per year to 8.7 million. This corresponds to an annual increase of 10.3 per cent. Thereafter the number of passengers has declined and remained stable at around or just below 7 million per year.

More than 95 per cent of all trips start or end in Stockholm, or pass through it. Around four fifths of all domestic trips have Stockholm as their destination or starting point.

In the years before deregulation, SAS and its affiliate/subsidiary Linjeflyg were the dominant players on the Swedish domestic civil aviation market. At the risk of oversimplification, it could be said that Linjeflyg was allowed to operate the routes which SAS did not wish to fly, whilst different regional airlines were allowed to operate routes that Linjeflyg wasn't interested in. In the spring of 1992, SAS acquired Linjeflyg and thus obtained a very strong position when deregulation came into effect. In 1994,

SAS had 4.7 million domestic passengers corresponding to a market share of around 70 per cent. A year later the company's market share had declined to around 65 per cent as a result of the rapid expansion of other companies.

The first company to take advantage of the freedom given by deregulation was Transwede. The company was established in 1985 and initially focused on charter flights. In the summer of 1992, Transwede began to operate the five most important domestic scheduled flights.

Transwede set their prices at a level considerably lower than SAS and also provided a high level of service. SAS operated at this juncture a tough competitive policy vis a vis Transwede. This together with the decline in domestic flights resulting from the recession meant that not only SAS but also Transwede incurred heavy losses.

From September 1st 1996, the Norwegian airline company Braathens SAFE has taken over half of Transwede's scheduled flights and also has an option on buying the remaining 50 per cent. Braathens compete so successfully in Norway with SAS that they have been able to capture more than half the domestic market. The company is also operating on the Stockholm-Oslo route where SAS earlier had a monopoly. It is estimated this route provides a turnover that is almost double that which Transwede has on the domestic Swedish market.

Malmö Aviation is a company that started operating freight transport and after deregulation in 1992 started scheduled flights between the centrally located Stockholm airport at Bromma and Malmö. Soon afterwards Malmö Aviation also started operating other routes.

Malmö Aviation has chosen a different competitive strategy to Transwede with a price level a little over SAS's. They have been able to do this, since they fly to Bromma instead of the main Stockholm airport Arlanda, enabling passengers to save 15-30 minutes travelling time to the city of Stockholm.

In contrast to Transwede and most other recently established airlines, they have been able to maintain high prices and occupancy and a large proportion of business travellers. This has made Malmö Aviation into the most profitable airline on the domestic market.

Nordic European Airlines is the fourth airline to operate a high volume of regular flights in Sweden. The company is basically a charter company but started in November 1995 to operate the Östersund-Stockholm route after receiving contracts from Swedish Defence for transporting all personnel over this route. There are 2-3 departures every weekday in each direction at low prices. SAS has in principle matched Nordic European's prices, which means that prices for business travellers have gone down by some 30 per cent.

Together these four airlines provide a large volume of regular flights on 19 domestic routes. In addition, there have been for some time a number of regional airline companies - around a dozen in recent years - which mainly use propeller driven aircraft for transport between smaller places and Stockholm, or for direct flights between smaller places themselves. The largest regional airline company is Skyways which flies to around 15 destinations in Sweden.

One result of deregulation is the availability of many new types of airline tickets, which makes it difficult to describe and analyse price developments. Consumers can now benefit more from low price tickets.

Transwede has introduced a new price category, a pre-booking price, which since 1994 has at SAS been called a business price. The only difference between this and the full fare is that the trip must be booked one or two days in advance and that the fare is 7-10 per cent lower. This has meant that just a small proportion of business travellers to-day actually pay the full fare.

Another recent development is that companies travelling a lot on a certain route can buy a bundle of tickets, normally 100, and get 5-15 per cent rebate compared with the full business fare. Transwede has bundled tickets on all its routes, while SAS only has them on routes exposed to competition. Deregulation has also meant that major customers can obtain a bonus from airline companies providing a further 5-10 per cent rebate.

In the first few years after deregulation, there was a relatively great fall in prices. In recent years, however, prices have increased, full fares especially, which to-day are higher than before deregulation. For the typical business traveller, the higher full fares are counterbalanced by the better opportunities of buying tickets at a discount. Cheaper types of tickets adapted to the needs of private individuals have also in real terms become somewhat less expensive. The conclusion is that prices overall have not changed very much as a result of deregulation, but that the price conscious business travellers, at least on those routes exposed to competition have better chances than earlier to save money. People flying from the smallest airports on regional airlines have, however, in many cases been confronted with significantly higher prices. In the first instance, this is due to the withdrawal of state subsidies that Linjeflyg earlier paid to regional airlines. Currently State subsidies for regional flights are insignificant.

5.3 Cases at the Competition Authority

Particularly in the years after deregulation, a large number of complaints were received concerning anti-competitive practices on the domestic civil aviation market. The complaints were related to e.g. predatory pricing, the granting off slots (take-off and landing rights) and ground handling services. Below follows a brief summary of two cases that have been examined by the Competition Authority.

Interlining

Interlining refers to a situation where an airline company accepts the tickets of another airline for the whole or a part of a passenger's trip. It is especially important for smaller airlines to have interline agreements with the large airlines in order to be able to offer their customers competitive products. In 1995 when Nordic European Airlines began to operate the Stockholm-Östersund route, the company applied for an interlining agreement with SAS, which had similar agreements with other airlines on the Swedish market. SAS, however, initially refused to conclude such an agreement with Nordic European. It was only after the Competition Authority's statement of objections that SAS concluded an agreement with Nordic European. The Competition Authority considered that SAS's practice constituted abuse of a dominant position and the Authority took the matter to the Stockholm City Court, the court of first instance for cases concerning competition law, requesting a fine of SEK 10 million be imposed on SAS.

Ground handling

During 1994 a number of complaints were received concerning market access for providing ground services in terms of handling of passengers, luggage and freight, loading and unloading aircraft as well as services connected with ground stops at national airports. The background to these complaints was as follows.

The Swedish Board of Civil Aviation (Lfv) operates and manages the national airports and at the same time is one of the largest players on the market for the provision of ground services. As a result Lfv has control over access to the market for ground handling services at the same time as it runs its own activities on the market. The applications of the complainant companies to provide ground handling services in a number of airports were dismissed by Lfv on weak grounds.

The Competition Authority stated that abuse of a dominant position had taken place if Lfv without objectively acceptable reasons failed to allow companies access.

After discussions with the Competition Authority, Lfv agreed to apply competitively neutral and transparent criteria on how other ground handling agents should be granted access. In addition Lfv undertook to allow at least one independent ground handling agent access to the two most important airports in Stockholm and Gothenburg and to explore conditions for market access at other airports.

5.4 Conclusions and Proposals

The overall assessment of the Competition Authority regarding deregulation of domestic flights is that there has been some success in that the market is today operating better would have been the case if it had not been deregulated. Competition has increased resulting in downward pressure on costs. On the routes exposed to competition, the number of flights has increased, and prices have fallen, at least for certain categories of passengers. On the other hand, the positive effects are far from fulfilling the high expectations that existed at the time of deregulation. Prices, in particular, have fallen to a lesser degree than had been expected.

The airline market possesses a number of features that can worsen the conditions for effective competition. One such feature is that the air transport market not only in Sweden, but also internationally has been tightly regulated and subject to different international regulatory systems and conventions. In many countries, large airlines often owned by the State have enjoyed a monopoly on their domestic market. After the successful deregulation of the American aviation market at the end of the 1970s, a number of countries, including the EU have followed the same path during the 1980s and 1990s. Today deregulation within the EU has come to a point where, for example, there are no formal obstacles in principle for SAS to fly between London and Paris. However, it is still not possible for an airline to run purely domestic flights in a country other than its own.¹ The regulation and price negotiations that have been a tradition on the airline market will probably continue to influence the behaviour of companies for some time into the future and thus also the conditions for competition. For this reason, competition authorities, as well as other supervisory bodies should be especially vigilant regarding different forms of anti-competitive practices. Special attention should also be directed towards the increasingly comprehensive co-operation between airlines when forming alliances.

Another practice affecting how the market operates is the relative insensitivity of passengers to prices. The fact that passengers, accounting for the major part of airline income do not themselves pay for their own tickets means that competition over departure times, convenience, bonus offers etc. are often more important factors than price when choosing an airline. A large part of the responsibility for this must rest with employers. If employers are not able to induce their employees to take greater account of prices, by means of incentive policies or stricter rules, airlines in the future will continue to have little interest in competing over prices.

1 This changed in April 1997.

Competition on the domestic market is also greatly affected by the strong position that SAS retains on the market. It is difficult for smaller companies to hold their own against SAS, even though there are indications that they may appear to be more cost efficient. This is partly attributable to how the market operates. It is, for example, a great advantage to have a well-built up route network.

As far as Sweden is concerned, there are strong reasons for pushing forward European deregulation of airlines and also creating more opportunities for non-European companies to compete in Europe. Further liberalisation should be implemented not only for inter-country transport, but also for transport within member states.

There are also good grounds for studying more closely the need for and the feasibility of introducing rules that make it easier for new airlines to establish themselves in the market. One example that might be mentioned is the proposal put forward to the effect that a dominant company, when facing competition from a smaller company establishing itself on a route, should not be allowed to reschedule its flights in connection with those of smaller companies. In addition, the conditions for differentiated pricing of slots (take-off and landing rights) should be the subject of investigation. The aim of such a change would be to steer flights where the willingness to pay is weak to off-peak hours, thereby opening up the attractive times to new competitors.

SWITZERLAND

[topics mainly refer to national airports Zurich (ZRH) and Geneva (GVA)]

Airports

Who is the airport regulator? What are its main tasks?

The Civil Aviation Authority (Federal Office for Civil Aviation, FOCA) is the supervisory body (e.g. Annex 14).

What is the prevailing ownership regime of airport infrastructure (private/public, national/ federal/local)? Are there situations of mixed private/public ownership? Do airlines own significant shares in airports? Are airports within the same airport system usually owned and/or operated by the same entity?

ZRH: Public ownership (Canton of Zurich); mixed private/public ownership (buildings).

GVA: Semi-private ownership (Shareholder: Canton of Geneva); no airline shareholders; no common airport system.

How are capacity expansions financed? Do public funds, subsidies or preferential loan conditions play a significant role?

Preferential interests on State funds; public cantonal funds; private financing for buildings possible (airlines, rental firms etc).

How is access to the market for airport capacity regulated? Is there a separation between the owners of airport infrastructure and the actual airport operators?

No separation between airport owners and operators (except for building owners).

What are the main features of standard licenses for airport operation (e.g. fees payable to the licensor, service obligations, extent of exclusive rights by licensee, if any)? Are there instances where several different companies are operating separate infrastructures within the same airport?

Possibilities for more than one Handling Agent exists and in practice (separate infrastructure). Charges to be approved by airport authority.

What is the regulatory framework for airport charges (landing and take-off charges, aircraft parking charges, passenger charges). What is the degree of freedom of the airport operator in setting charges? Are charges set by a regulator? Are they cost-related? Is peak-load pricing allowed? To what extent do international treaties put constraints on the design of airport charges?

Airport operators are free in setting up user charges, as long as ICAO recommendations are respected (e.g. cost-relation, non-discrimination, etc.). In addition, FOCA has the possibility to intervene when Federal Law on the Supervision of Prices is being hurt (e.g. misuse of charges, inadequate increase of rates). Peak pricing not explicitly forbidden.

Slot Allocation

Which, if any, airports are slot constrained for at least some periods of the day?

ZRH: for the whole operation day

GVA: for the whole operation day

What is the nature of the binding constraint, e.g. noise restrictions, terminal constraints?

ZRH: 1. Single Runway in peaks hours; 2. Ramp Stand availability; 3. Movements late evening/early morning (noise restriction)

Approximately, what is the distribution of existing slots among airlines at each slot-constrained airport?

ZRH: Winter 96+Summer 97= 250'000 Slots

GVA: Winter 96+Summer 97=102'000 Slots

How are slot allocation decisions made?

According to IATA Schedule Procedure Guide and EEC 95/93

What are the criteria by which slot allocations are made?

According to IATA Schedule Procedure Guide and EEC 95/93

How does the decision-maker relate to the airlines?

Via SITA Teletype Network

How are slot-swaps implemented (scheduling committees, clearance co-ordinator)?

By clearance of slot co-ordinator

To what extent are grandfather rights actually enforceable?

If Scheduled Carrier has operated at least 80 per cent of planned slots (Charter Carriers: 70 per cent) per season, historical precedence rule for same timing, same aircraft type or smaller and same operation-days will apply, subject to airport capacity remains at least same as in comparable historical seasons.

Is there a (monetary or non-monetary) market for existing slots? In the event, are trades frequent?

Slot-swaps only. Swiss coordinator provides carriers with data for possible slot-swaps.

Can slots be leased by airlines?

No

What safeguard regulatory mechanism prevent improper use of slots by incumbents?

Continuous slot-monitoring in cooperation with airport authority. Information to carriers concerned about differences to planned slots and consequences in case of use it or lose it rule or misuse.

How are new slots allocated?

According new entrance rule in IATA SPG; during current season upon slot-availability first come first served.

To whom do existing slots ultimately belong?

To the operating carrier; for free slots to slot pool of the co-ordinator.

Ground Handling Services

What is the regulatory and market environment for the provision of ground handling services? What are the criteria by which

- a) self provision by airlines is allowed or not allowed**
- b) the number of participants is limited**
- c) the identity of participants is chosen? Who makes the choice?**

Switzerland has closely monitored development of ground handling regulations within ECAC and therefore already introduced possibilities for:

- free choice between two handling agents
- dedicated check-in facilities. Criteria include
 - a) threshold of 1,5 per cent (4 per cent) of overall traffic
 - b) terminal-side: capacity constraints; air-side: safety and security considerations;
 - c) national carrier plus one independent agent. The choice is made by the airport authority.

To what extent is the airport operator involved in service provision?

At Swiss national airports, the operators are not involved in the provision of handling services.

To what extent is the dominant airline involved in service provision?

Subsidiary of national airline's Holding company is involved in provision of handling services at Swiss national airports.

Is access to these services by independent operators and/or airlines free?

Subject to the granting of reciprocal rights in home state of applicant airline and to reaching threshold in fig. 1 a)

Approximately, how many companies are currently providing handling services in major airports?

Air-side: two to three companies; terminal-side approx. six to ten companies.

Does self provision by airlines play a significant role?

No

What are the criteria, if any, for restricting access to ground handling services?

Safety and security, capacity constraints as well as available space

Are ground-handling tariffs regulated?

No, only misuse (excessive tariff increases, discrimination etc.).

UNITED KINGDOM

(The Office of Fair Trading)

Effect of slots on competition in air transport

At a slot-constrained airport it is not possible for all profitable entry opportunities to be taken up and consequently entry has to be rationed. In the UK, as in other countries in the EU, 50 per cent of the available slots are allocated to “new entrants” in accordance with EC Regulation 95/93. This has the effect of spreading slots very thinly amongst a large number of airlines.

Under this allocation system it is clearly more difficult for an airline to enter at a high daily frequency level (although it is possible to enhance frequency over time). The effect on competition is however ambiguous and will depend upon a number of factors including market definition, the extent of actual competition on the route, the effectiveness of low scale entry in constraining prices, and the extent of non-slot barriers to entry.

On short-haul routes non-stop city-pair flights are usually the relevant market definition for both time and non-time sensitive passengers (although for the latter, other forms of transport, particularly high speed rail, may also provide a competitive constraint). The evidence from the UK is that competition is usually most effective when new entrants are able to operate a high frequency of service. Such a service is much more attractive to high paying business passengers and allows the airline to obtain a cost effective level of aircraft utilisation. However small scale entry may still be effective in constraining prices, particularly if the new entrant is able to obtain slots at key times. Small scale entry can also be highly effective in undermining collusive or parallel pricing behaviour.

On long-haul flights the relevant market is also usually defined with respect to individual city-pairs. For *time sensitive* passengers there is often no adequate substitute for the direct flight and, provided slots can be obtained at reasonably competitive times, the minimum efficient scale to compete is seldom more than one flight per day. Where there is no direct flight between the city-pair frequent services to connect to an airlines network at another airport can be important for attracting time-sensitive passengers as these passengers have a high opportunity cost of time, particularly that spent waiting for a connection at a terminal. Non-time sensitive passengers are often more willing to travel indirectly between city-pairs for a lower fare and, because of the widespread choice of routes and airlines, competition between hubs for such connecting passengers is often intense.

In summary, it is undoubtedly more difficult to enter at a high as opposed to a low frequency of service. Although large scale entry is usually most effective in constraining prices, small scale entry can also have an important competitive impact on both long and short-haul routes provided that the airline is able to acquire slots at key times.

Ways in which slots are allocated and re-allocated

How scheduling committees operate

There is a widely held, and somewhat outdated misconception that slots are allocated by committee. In practice around the world, individuals, usually Coordinators, are responsible for slot allocation decisions. Coordinators are usually supported by an administrative team. In most countries Coordinators are employees of the “Flag carrier” or “National” airline and are usually closely associated with the airlines aircraft scheduling department. In the UK ACL has been established as a separate legal entity (company limited by guarantee) the members of which are nine airlines. It has been appointed as the Coordinator at Heathrow, Gatwick and a number of other airports. It has also been appointed at a number of some smaller, less congested airports to provide a data collection service.

Coordinators undertake their slot allocation role within guidelines laid down (and updated twice a year) by IATA called the IATA Scheduling Procedures Guide. In some countries committees exist to advise the Coordinator.

The IATA Scheduling Procedures Guide lays down the process for slot allocation, the timetable, the priorities for choosing between different types of traffic and explains the role and responsibilities of the Coordinator and the airlines.

The effect of requiring the independence of the scheduler from the airlines

In some countries there is a lack of objectivity in the decisions made by the Coordinator and suspicion exists that his/her employer the “National” airline gains some advantage in the scheduling process, in particular where the Coordinators career is dependent upon that airline.

In some countries the Coordination function is starved of the resources which it needs, in particular computer systems, because it is not perceived as a priority for investment by the airline concerned.

In Europe the EC Regulation 95/93 was adopted in January 1993 and is now applied throughout the EU. This regulation requires Coordinators to act in a neutral, transparent and non-discriminatory way, but does not necessarily require them to be independent. In practice it is widely recognised that to be perceived to be operating in such a way the Coordinator should be free from the influence of any one interested party.

There are two prime obstacles to Coordinators’ independence:

- the reluctance of the National airlines to let them go; and
- finding an alternative source of finance for an independent organisation.

Air transport competition effects of “grandfathering” rules

The main economic argument in favour of grandfathering rights is that they provide a close substitute to a permanent property right to the slot and as such provide some certainty for airlines wishing to make longer term investment decisions in aircraft, crews, infrastructure and marketing.

Whether grandfathering rights have any adverse effects on competition depends largely on the degree to which an airport is congested. At an airport in which the demands for slots exceed the available supply in only a small number of hours the grandfathering of slots at those times should allow competitors a reasonable degree of access to slots at other times. However, at a heavily congested airport, where demand has been in excess of supply across most of the operating day for several years, the vast bulk of slots are reclaimed year by year by airlines claiming grandfather rights. Unless the available number of slots can be increased or other steps are taken, airlines without a slot, or with only a small number of slots, will have little or no opportunity to compete on many routes where competition would otherwise be likely to occur. This can lead not only to higher prices but also to a lack of competitive pressure on the dominant operators costs and a stifling of innovation.

The impact of grandfather rights at congested airports is likely to be felt more strongly in the market for time sensitive passengers. Non-time sensitive passengers are protected to a greater extent by competition for indirect services from competing hubs.

Grandfather rights can have additional adverse effects if they are allocated predominantly to a single airline (although this is not a consequence of grandfather rights *per se*). In particular a carrier with a large slot holding enjoys much more flexibility in scheduling and can more readily operate high frequency services. They are thus likely to attract significant quantities of feed traffic making it difficult for new entrants to compete on routes where there is a relatively high proportion of interconnecting traffic.

Air transport competition effects of “use or lose” rules

Use it or lose it rules were introduced in the EU in Regulation 95/93. This requires airlines to use their “series of slots” for 80 per cent of the time, failing which the slot is withdrawn and reallocated. A slot cannot be withdrawn for lack of punctuality or other aspects of poor performance. Even if the 80 per cent utilisation criteria is not met the airline is still able to retain the slot if the reason for the non-use was beyond the airline’s operational control.

The evidence in the UK is that almost all slots at a congested airport such as Heathrow are actually used and very few are confiscated. In summer 1995 only 5-6 per cent of the slots which had been made available to airlines through the pool (i.e non-grandfathered slots) had been withdrawn because airlines had failed to use them for the required time during the previous season. This equates to less than 0.5 per cent of the total number of slots at Heathrow. The withdrawn slots were randomly spread and were mostly in unattractive off-peak periods. These slots are therefore highly unlikely to have been useful for airlines wishing to compete.

Airlines’ incentive to “hoard” slots under the scheduling committee rules

Use it or lose it rules are effective in providing an incentive to utilise slots fully, at least at congested airports. However there are often economic incentives, unrelated to the scheduling rules, which result in slots being hoarded in the sense that they are not used in their most efficient manner. Slots can technically be hoarded in a number of ways including operating low profit routes or utilising smaller aircraft. Slots can also be temporarily transferred to a franchisee or alliance partner who may be able to use the slot more efficiently in the short-term.

As airlines are unable to sell slots it is in an airlines’ interest to use them on any route in which they can generate an incremental profit. This includes the increase in revenues which are derived from traffic transferring onto connecting flights. It may even be worthwhile for an airline to sustain short-term

losses on a route if it envisages greater marketing opportunities in the future or if it attaches a probability to being able to sell the slots at a later date.

The incentive to hoard slots is even greater for airlines with a significant presence at the airport as surrendering the slots to a pool risks them being taken up by airlines who either enter their routes or attract away connecting traffic.

Alternative mechanisms for re-allocation

Advantages and disadvantages of slot swapping compared with slot buying and selling

Slot swapping allows for mutually advantageous trades and has been an important mechanism in allowing airlines to obtain slots at the times appropriate to operate to their chosen destinations or to provide a regularly timed high frequency service.

All of these features can however be provided more effectively through the buying and selling of slots in much the same way that the pricing mechanism economically dominates a system based on barter. A particular problem of trying to initiate a slot swap is that differently timed slots have a different value. It is thus difficult for welfare enhancing slot swaps to take place without a compensating money payment. In addition a system of buying and selling is likely to reduce the instances of technical slot hoarding by increasing the opportunity cost of using a slot in a socially inefficient manner. This in turn increases the number of slots which would be potentially available to new entrants. More generally, a market mechanism would allow those airlines with lower costs to gain market share at the expense of inefficient rivals leading to a more competitive outcome.

The historical rationale for non-money trades is that they prevent a dominant airline buying up slots and increasing its market share at an airport. Bans on the buying and selling of slots is however an extremely clumsy and inefficient means of obtaining this objective as whilst they prevent a dominant airline expanding it also limits the potential for successful and low cost airlines which are not dominant from increasing their market share.

Moreover the rationale for bans on slot trading both presumes that the initial allocation of grandfather rights was efficient and that increased concentration at congested airports would lead to a reduction in competition. Both presumptions are frequently likely to be false. In many countries the initial allocation of slots simply preserved the historical dominance of the national carrier. This, together with the new entrant rules and bans of slot trading typically leads to a market structure whereby an airport becomes dominated by a single airline with a competitive fringe of smaller companies. These smaller airlines often do not have the feed or the frequency to be able to compete effectively with the dominant airline. Competition, particularly for time-sensitive passengers, will thus often be better served when efficient medium sized airlines are able to expand at an airport and where key hubs are contested by two or three major airlines. Where medium sized airlines grow at the expense of smaller new entrants this is likely to lead to an increase in concentration at the congested airport (as measured by the HHI) although the concentration in key relevant economic markets should decline.

Whether airline alliances provide an alternative, distinct means to reallocate slots

One of the early rationales for airline alliances was to overcome some of the many market distortions in air markets such as restrictive bi-lateral agreements and the lack of access to slots at

congested airports. However whilst an alliance can increase the possibilities for mutually efficient trades, and in doing so reduce the inefficiencies of slot hoarding, it is hardly a substitute for slot trading. In particular alliances cannot be used to increase the net amount of slots which are available to the individual parties.

Evaluation for using markets for slot allocations

Effects on air transport competition of introducing a market for the permanent use of a slot

It is important to distinguish between those effects which result from the introduction of a market mechanism for the permanent use of a slot and those which result from the initial allocation of slots. The effects of introducing a market for slots will also depend upon the level of congestion at an airport and whether an open skies agreement is in place. However, all things being equal, the introduction of a market for the permanent use of a slot will lead to slots being allocated to the most efficient operator at an airport which rewards low cost and innovative airlines and thus increases competition.

The introduction of a market mechanism is likely to convey a number of specific advantages. Firstly, by introducing a significant opportunity cost to holding a slot, it will reduce the incidence of slot hoarding. Secondly, by allowing compensating payments between airlines, it increases the potential for mutually advantageous slot trades to occur, allowing airlines to schedule flights at those times most valued by customers. Thirdly, by increasing the ability of airlines to obtain slots at the precise time they want, it gives small scale entrants who suffer from a feed disadvantage a greater opportunity to compete for inter-lining traffic (i.e they can offer customers shorter waiting times to compensate for the perceived disadvantage of inter- over intra-lining). Finally, introducing a market for slots can in theory create an incentive (or at least a signal) for airports to expand capacity, particularly at peak times (although in practice environmental and political constraints are likely to be more important in determining the extent of new capacity).

The principal disadvantage of introducing a market for slots is that it may lead to greater concentration at congested airports. This can happen in two ways: the dominant airline may attempt to buy up further slots in order to limit the opportunities for competitors to obtain the frequencies and feed necessary to provide an effective rival service, and “new entrants” would no longer enjoy advantages in slot allocations over incumbents.

An increase in airport concentration which arises through the dominant airline expanding their market share is likely to pose significant competition problems, particularly on short-haul flights and in the market for time sensitive passengers where there is only limited competition from rival hubs.

However increases in airport concentration caused by small and medium sized incumbents gaining market share at the expense of new entrants is more likely to be pro- than anti-competitive. Under the present slot allocation system there is no filter to prevent inefficient “new entrants” obtaining slots or from serving routes of marginal profitability. In contrast a market based system should ensure that slots obtained by non-dominant airlines are used efficiently. Moreover, non-dominant airlines who already have a significant presence at a congested airport are in general much better positioned to match the frequencies of the dominant incumbent and to compete for feed traffic.

Whether the dominant airline at an airport have an incentive to pay the highest price

In considering whether to sell a slot an airline will need to weigh up the market price against the opportunity cost of the slot. The latter includes not only the profits which would be foregone on the route on which the slot is currently employed, but also the reduced revenues which result from the loss of feed traffic and the increase in competition from the slot purchaser.

A dominant airline will have strong incentives to make additional purchases as they not only benefit from cost reductions (through enhanced network economies of scale or economies of density) but also the reduction in competition. This does not however imply that the dominant airline will always be the one who is prepared to pay the most. Although the desire to monopolise will always be present, the dominant airline may well have higher costs than others operating at the airport. Moreover, they may have largely exhausted the economies of density and run out of profitable opportunities for expansion. In contrast the incremental reduction in costs obtained from obtaining a further slot may be greater for a small scale incumbent, or a new entrant who wished to enter on a reasonable scale. Moreover the marketing opportunities and profits from establishing a new route may be significantly greater for a new entrant, particularly one who has previously been denied access through bilateral arrangements.

Whether the dominant airline will be prepared to pay more for the slot will also depend upon the nature of the hub. In "US style" hubs, where there is little point-to-point traffic, there is very little incentive for airlines other than the dominant carrier to expand capacity. However at major EU airports it is more likely that the airport is an important destination in its own right. As all major airlines in the region will wish to add that city to their network the dominant airline is likely to face strong competition for the acquisition of slots.

Effects on air transport competition of introducing an anonymous market for slots, ie whether there is price discrimination which affects airline competition where purchasing/selling is not anonymous

Much will depend upon the nature of the property rights attributable to the slot and in particular whether the seller is able to place restrictive covenants on the slot which would prevent its use of routes in competition to the vendor. If such covenants cannot be enforced then the market will be "anonymous" in the sense that there would be nothing to prevent slots being bought up by an intermediary and then reallocated to the highest bidder.

If on the other hand such covenants are legally enforceable then dominant airlines in particular may be more willing to sell slots. The increased trade in slots would increase allocative and productive efficiency although it would be unlikely to increase the extent of direct competition on routes.

In such an anonymous market the leading airline will be powerless to prevent small scale and inefficient airlines from selling their peak slots to airlines who could use them most effectively. If there are sufficient numbers of these airlines wishing to sell then the leading airline will not be able to price discriminate against airlines who would wish to set up in direct competition with them. In other words price discrimination would only be possible if the leading airline is highly dominant.

Again much depends upon the nature of the airport. If the airport is in a city which is an important destination in its own right (as opposed to a US style hub), then smaller airlines will wish to retain their flights to connect to their hubs and will be less willing to sell.

Effects on air transport competition of airlines leasing slots to other airlines

In principal there is little difference between the permanent sale of a slot which has restrictive covenants and one which is leased. In both cases it allows for the slot to be used in a more efficient manner, ie by a lower cost airline or on a more profitable route, but does not allow for an increase in head-to-head competition. Depending on the terms of the lease, it may also allow more slots to become available to new entrants particularly if they reduce the risk to the vendor that the slots can be traded at a later date and thus will become more valuable. In effect leasing allows for the more efficient hoarding of a slot in that the airline retains control over the slot but gives it temporarily to an airline who can utilise it more effectively.

Effects on air transport competition of introducing a market for, not the permanent use of a slot, but rather limited term (several year) use of a slot

This depends upon a number of factors including the initial allocation of slots, the percentage of “franchise” slots that are available, and, most importantly, who they revert to at the end of the “franchise”.

If the slots revert to the original owner at the end of the term the system would be indistinguishable from leasing. Franchising would thus lead to more slots becoming available, a more efficient use of slots, and a reduction in hoarding. It would be unlikely however to significantly increase competition to the dominant airline at the airport.

If the slots were to be returned to the general slot pool at the end of the term then this system would be essentially the same as one where slots are bought and sold on a permanent basis (although the value of the slots would be lower). However such a system would also be more radical in that it would force airlines to give up their grandfather rights at the end of the franchise. This would provide a greater opportunity for efficient airlines to obtain the slots necessarily to expand. Because there would be a ready supply of slots available for sale each year it would also be more difficult for a dominant airlines to prevent rivals who wished to challenge their position obtaining slots.

How the existence of airline alliances affects the workings of such a market

Airline alliances are primarily designed to encourage inter-connecting passengers onto their network. They do this primarily through offering a higher frequency of service, shorter connecting times and providing customers with the perceived advantage of travelling with a single airline on all legs of their journey. These cost and network advantages mean that the strongest alliance at a particular hub is one who is most likely to place the highest value on the available slots. A slot trading system, where slots went to those who value them most, may thus not provide an additional source of supply for airlines at their rival’s hub. There are however a couple of important exceptions. Firstly, on routes where there is a high degree of local point-to-point traffic, alliances are unlikely to enjoy a significant feed or cost advantage and so other airlines may value slots equally. Secondly, if the hub airport is an important destination in its own right rival alliances will place a high value on spoke services to their hub. In such cases slot trading could provide an additional means of obtaining attractive slots, particularly at congested airports where only a limited supply of pool slots are likely to be available.

In general however introducing a market mechanism for the exchange of slots is likely to increase the already strong trend towards airlines concentrating their services around their hub airport. As is well known, the welfare effects of this are ambiguous with competition likely to increase for non-time

sensitive passengers and on those routes where no direct services exist, whilst reducing competition on direct city-pair routes for time sensitive passengers.

Airlines' incentive to "hoard" slots under a market system

There is no incentive to hoard slots under a perfectly competitive market system where the price reflects the expected present and future value of the asset. However, if the market for slots is not perfectly competitive, e.g because the initial allocation of slots creates a dominant airline at a congested airport, airlines may well prefer to use their slot on a low profit route rather than risk selling to a rival who could then enter on the airline's most profitable routes.

As non-dominant airlines have no power to prevent their rivals from obtaining slots from other sources, they will have no incentive to hoard slots under a market system.

Although a market based system may not entirely eliminate hoarding one of its principal benefits is that it greatly reduces the incentive to underutilise slots which it does by increasing the opportunity cost of airlines using slots in an inefficient manner. "Hoarding" can also be nearly eliminated in a market based system if dominant airlines are able to place covenants on the sale of slots (or lease or franchise them) so that they do not fall into the hands of rivals who might engage in head-to-head competition.

Property rights

How the assignment of property rights to existing slots affects the use of the slots

Under the present system slots may or may not convey a legal property right. However, economically slots do have a property right in the sense that the airline has the exclusive right to use their allocated slots for a season. Moreover, the principal of grandfathering gives a degree of permanency to that exclusive right. Certainly there is a risk of confiscation of the slot, however, in economic terms an airline has the exclusive right to use a slot for an uncertain period of time (minimum one season). When looked at in these terms, what is being suggested is not the granting of property rights, but the granting of permanent property rights.

A permanent slot is clearly a more valuable asset than one where there is a risk of future confiscation. However it is difficult to predict whether making property rights permanent would either increase the demand for slots or the willingness of the owners to sell, particularly as the previous risk of confiscation was arguably only significant for the dominant airline at each congested airport.

Favouring some allocations

The effect of providing "new entrants" with advantages in gaining slots and of providing small incumbents with advantages over large incumbents in gaining slots

Although new entrants can be large airlines who were previously denied access to an airport through restrictive bilateral agreements they are often high cost airlines or operators who have limited potential or ambition to expand. In particular many "new entrants" to Heathrow are often state subsidised airlines wishing to serve new long haul routes under bilateral agreements where airlines providing indirect routings may already provide effective competition. Small scale incumbents could well be more efficient

operators and better placed to provide competition to the dominant airline at the airport. There thus seems no particular reason to favour “new entrants” as opposed to small scale incumbents who may wish to expand their operations at an airport.

There is more case for favouring new entrants and smaller incumbents over airlines who already have a large presence at the airport. However reducing concentration does not necessarily increase competition at the airport or ensure that the scarce slot resource is used most effectively. In particular, as airlines become larger, they increase their feed and can benefit from reduced costs, enabling them to compete more effectively with the dominant airline. Indeed, absence of feed traffic, is one of the principal barriers to entry in the market for time sensitive passengers.

Whether “new entrants with low costs” should be favoured over “new entrants with high costs” and what criteria should be applied to distinguish between them

Clearly all things being equal lower cost new entrants will be able to provide more effective competition to incumbent airlines than those with high costs. The operating costs of a new airline is however only one factor in the consideration of who would provide the most effective competition. In particular demand side considerations, such as the ability to benefit from feed traffic or to provide a high frequency service, could be just as important as costs in determining the efficiency of a new entrant airline.

UNITED STATES

The Market for Airport Slots in the US

In the United States, the issue of airport slot allocation is predominantly a domestic policy issue handled by the federal government, and the policy approach and the rules governing international slot allocation differ from the domestic regime. Two of the four most congested US airports subject to federal slot allocation procedures (La Guardia in New York and National in Washington, DC) have virtually no international operations. This situation is very different from Europe where international operations predominate, and where governmental bodies other than the national government have much more to say about slot allocation procedures. Accordingly, the discussion that follows deals primarily with US domestic policy. Although foreign carrier operations are an important element of service at US airports, their relatively small share of overall operations means that international service did not drive the making of past or current slot allocation policy. Instead, the US slot policy was primarily driven by concern regarding domestic operations.

The High Density Traffic Airports Rule (HDR) was originally adopted in 1968 as a solution to the problems of congestion at five (now four) of the busiest airports in the country. Airport congestion can result from a common-property resource problem, where no well-defined property rights exist for a resource that is available in a fixed supply. In the absence of property rights for the fixed resource, competing users seek to overuse it. Here, the resource that is available in fixed supply is the capacity of the airport. Physical and technological constraints, such as the number of runways and terminals and the capability of the air traffic control system, limit the density and frequency of operations. Overuse of the scarce resource manifests itself in congestion and delay as the number of airplanes attempting to land or take off during the same period exceeds the airport's physical capacity.

The 1968 HDR required carriers wishing to land or take off during restricted periods to obtain the privilege to do so. These landing and take off privileges are commonly referred to as "slots." The 1968 HDR set the total number of slot operations-takeoffs and landings-allowed during certain restricted time periods at the high density traffic airports (HDTAs) and distributed this quota of operating privileges to incumbent carriers. The number of operations allowed under the HDR is based on the estimated capacity of each airport.

Until 1985, the incumbent airlines at each high density traffic airport decided how slots would be allocated, with any reallocation requiring their unanimous approval. The incumbent airlines could trade slots among themselves, one for one. But increasing competition in the post- 1977 deregulation era strained this method severely and in many cases, the allocation system broke down completely, freezing the previous allocation in place and denying slots to new entrants. An economically efficient solution to a common-property resource problem would limit the use of the resource and allocate rights of use to those who value them highest. Starting in April 1986, the HDR, as amended in the FAA 1985 Final Rule, largely accomplished this by encouraging the development of a market-based slot transfer system for domestic slots at HDTAs.

The HDR currently affects operations at four airports: Kennedy (New York City), La Guardia (New York City), O'Hare (Chicago), and National (Washington). Present regulations allow slot holders to sell, trade or lease their domestic slots, after a prescribed minimum period of usage, and permit slots to be

held by any party meeting certain FAA qualifications. The FAA retains the right to repossess slots, which the HDR describes as operating privileges, not property rights. Slots may be withdrawn for such reasons as making necessary allocations for international flights and implementing competition goals. Slots also will be recalled for reallocation if used less than 80 percent of the time over a two-month period. The FAA rules provide for lotteries to distribute the slots that have been recalled for nonuse, voluntarily transferred back to it, or are otherwise not currently allocated when a sufficient number of slots become available. The last lottery was held in 1989. Both incumbent and new entrant carriers may enter these lotteries, in which the order of choice is determined by random drawing. During the first lottery sequence, 25 percent of the slots (but no fewer than two) are set aside for new entrant carriers.

Criticisms of the Use of "Slots" to Allocate Airport Capacity in the US

The HDR has been criticized for setting, by its mere implementation, artificial constraints on airport operations. Critics also have contended that the HDR, by limiting entry, fosters the exercise of market power by incumbent carriers. The level of concentration at the HDTAs also has been a source of concern. Based on slot holdings, each of the HDTAs considered alone is either moderately or highly concentrated, according to the standards of the Merger Guidelines. As evidence of the anticompetitive effects of the HDR, critics have pointed to the higher concentration and higher ticket prices at HDTAs relative to other airports. Some critics have also addressed distributional issues, observing that incumbent carriers received a valuable (and salable) right for free.

Several observations are relevant to these criticisms. First, as long as the slot quotas reflect each airport's capacity, the slots are not "artificial" constraints on airport operations. In the US, the binding constraint on net increases in operations has been the HDTAs' physical capacity, not the use of the "slot" system. If the slot system were eliminated tomorrow, the constraint on operations would remain, and probably would be manifest in additional delays.

Second, the existence of higher prices for air travel at slot controlled airports does not necessarily imply the existence of anticompetitive behavior. Even if markets were perfectly competitive, fares at capacity-constrained airports would be higher, all other things equal, than at airports without capacity constraints. Equilibrium competitive prices for air travel at capacity-constrained airports would reflect the "scarcity rents" associated with the constraint on capacity. Indeed, the absence of higher airfares at slot constrained airports would imply (again, all other things equal) that landing rights at HDTAs were not a valuable resource, and slots would not trade at positive prices.

Using slot usage data supplied by the US Federal Aviation Administration (FAA), the FTC Bureau of Economics Staff in 1991 and 1993 tested several hypotheses about anticompetitive behavior in slot markets.¹ The first hypothesis flows from the standard analysis of market power, which implies that dominant firms have a greater incentive to reduce output than do fringe firms, and predicts that smaller fringe firms will increase output in response to a contraction of output by the dominant firm. This reasoning suggests that larger carriers would attempt to restrict output by reducing the number of days on which a slot was used, and implies that larger carriers would use their slots less intensively than would the smaller fringe carriers.

A second anticompetitive hypothesis was that dominant carriers would be unwilling to sell slots to potential new entrants at competitive rates, but instead would lease their slots to selected other carriers, with the purpose of deterring entry by carriers likely to increase overall slot use. In this scenario, dominant airlines would choose their competitors by leasing slots to them. In this way, the dominant firm(s) could both ensure that less efficient firms would be competing with them for the same passengers

and simultaneously deter the entry of more efficient firms. This hypothesis implies (1) that the dominant air carriers will be net lessors of slots; and (2) that these leased slots will be used relatively less intensively than slots held and operated by the dominant carriers.

The empirical results obtained by the FTC staff were largely inconsistent with these two anticompetitive theories. Slot usage for all carriers at the four HDTAs tended to be very high -- typically above 90 percent -- and the data indicated no relationship between market share and slot usage. That is, the negative relationship between market share and slot usage predicted by the anticompetitive hypothesis did not emerge from actual slot usage data. Further, rather than being net lessors of slots, the largest firms at each of the four HDTAs were consistently net lessees of slots. This result, together with the high degree of slot usage, is inconsistent with the implications of these anticompetitive theories.²

Even if the allocation of slots is efficient, it might have been better for the Federal treasury had the original recipients of slots paid for them, rather than receiving them for free.³ But economic theory implies that in the absence of transactions costs, the initial allocation of these rights will not affect the allocative efficiency of the ultimate market allocation.⁴ That is, the fact that incumbent airlines in 1968 received a windfall does not mean that today slots are not efficiently allocated to their highest-valued use.

Several new entrant carriers, however, have recently complained that despite long searches they are unable to obtain slots at HDTAs, which calls into question whether the secondary market is functioning as efficiently as possible. One possible explanation of these complaints is that the existing slot allocation is relatively efficient and the new entrants are simply unwilling to pay the required price to re-allocate the slots.

An alternative explanation is that transactions costs for acquiring a critical mass of slots are relatively high, and that new entrants have been unable to use the secondary market to acquire efficiently slots for entry. In particular, successful entry on some routes may require a frequent pattern of service between the new entrant's hub and one of the HDTAs. To establish a profitable US domestic service, carriers often find that they must offer frequent service throughout the day to appeal to the business traveller. Since business travellers are willing to pay a premium for convenient service, airlines without a reasonably frequent service will be unable to attract premium passengers who are usually essential for establishing a profitable service between two cities. Although new entrants often find that one or two slots may be available at odd times of day, putting together a package is apparently much more difficult. Unless one carrier happens to be downsizing its service and is willing simultaneously to sell off a large group of slots, a new entrant would have to acquire slots from several sellers simultaneously, and arranging a workable package might be difficult.

Distinguishing between a market with low transactions costs and efficient allocations and a market with high transactions costs and inefficient allocations can be difficult. Entry could be difficult in both circumstances, and relatively few transactions would be expected in either case. In the case of hub airports (like Chicago O'Hare), the marginal value of additional flights to the incumbent hub carriers is probably very high since each flight expands the reach of their entire network. A new entrant with a much smaller network might not generate enough revenue to justify paying the price necessary for entry at such a hub even if there is no anticompetitive "hub" premium. For other airports like New York's La Guardia where there are many more point to point operations, the inability of entrants to obtain slots is harder to explain if transactions costs are low. With lower costs than many incumbent carriers, entrants should be able to pay the scarcity premium and still be profitable if the secondary market is functioning effectively.

There continues to be some concern that the new entrant's problem may be exacerbated when the proposed service is one in direct competition with an existing incumbent with market power. Many nonstop airline routes have relatively little competition, and entry on such routes often lowers fares dramatically. Most incumbents would be unwilling to sell slots at a price reflecting only the airport's scarcity premium when those slots are going to be used in direct competition with its service. With low transactions costs, an entrant could approach other airlines, but even if they have a useable package of slots available, the incumbent may be able to outbid the entrant for those slots. Given the existing structure of slot transactions, the seller knows who is bidding on the slots. The knowledge of who is bidding on the slots makes it possible to predict how the slots would be used. With that knowledge, a seller receiving a bid from an entrant should logically seek out the incumbent and solicit a counter bid, since prices tend to fall dramatically upon entry of new, direct competitors on airline routes. Notwithstanding the FTC study (*see above*), it is possible that incumbents would find it in their interest to make a higher bid than the entrant could afford even if they had no particular plan for how to use the slots.

Although an incumbent would have to find a use for such slots or risk losing them under existing use or lose rules, not all uses are equally efficient. In particular, at least one US airport subject to HDR rules has some incumbents operating or leasing "jet" slots for use by commuter aircraft.⁵ Since commuter aircraft operate at much smaller passenger volumes and significantly higher per passenger costs than jet aircraft, the use of these highly valued jet slots for commuter planes suggests that the market for slots is working imperfectly.

Possible Changes in Slot Allocation Mechanisms

Prohibit the sale of slots

Practices regarding whether slots can be purchased vary in different countries. Although the buy/sell rule is well established in the US for domestic slots⁶, under at least one interpretation of current EC slot rules, the buying and selling of slots is illegal. Instead, "excess" slots must be returned to the slot co-ordinator for redistribution. Not surprisingly, very few slots representing capacity at useable times are returned, and entrants have a particularly hard time acquiring slots. Rules that prohibit the sale of slots are likely to be inefficient. Creating a market for slots assists airlines in adjusting their holdings at an airport over time to reflect changing conditions in the demand for air travel among different airlines. Absent some market mechanism, the system of simply trading one slot for another is inefficient if the user with the highest value has nothing of similar value to trade. In particular, new entrants that were not in existence when the initial allocation was established would be shut out of the market. Although slot rules attempt to compensate for this problem by according new entrants a higher priority when new slots become available through capacity expansion, the small number of extra slots made available in this fashion can make effective entry impossible for new carriers at tightly controlled airports. In practice, in countries where there is no officially sanctioned market for slots, there is an active "grey market" for slots whereby some unequal trades are accompanied by cash or other considerations to make a bartering system workable.

Permit secondary sales of slots

By permitting the active buying and selling of slots as the US does, airlines can adjust their slot holdings over time to accommodate shifts in demand. Carriers that decide to downsize their presence at a particular airport can sell to carriers with a demand for more access. In addition, while many carriers may be able profitably to use a slot at a HDTA, some carriers may value service on particular routes they serve more highly than other carriers, leading to readjustments of slot holdings. Regardless of how the initial

allocation is made (typically through grandfathering existing carriers), an active secondary market for slots will produce an efficient outcome if transactions costs for arranging sales are relatively low. Over time, if one carrier acquired enough slots to exercise market power in the pricing of slots, the slot authority or an antitrust agency might have to intervene to restore a more competitive market, but the general assumption is that short of acquiring or enhancing market power, most transactions would be presumed legal. Although an entrant may have to pay a higher price than it prefers for slots, entry should still be practical for carriers with relatively low costs and adequate financing. Internationally, non-market factors may interfere with the smooth functioning of a secondary market if (for example) subsidies insulate some carriers from market forces. In addition, if some carriers "must" serve certain routes regardless of profitability because national prestige requires a flag airline to provide some service, then a secondary slot market will not function efficiently in all cases.

Conduct periodic auctions of slots

If transactions costs for acquiring packages of slots suitable for entry are relatively high, however, then the existence of a secondary market may be insufficient to promote efficient usage of scarce capacity even in the absence of incumbent market power. The primary advantage of a periodic auction involving a percentage of the capacity at an airport throughout the day is that it will restore some liquidity to markets where the transaction costs of finding the right package to launch new service are very high. Even existing incumbents could benefit from such an auction if they wanted to set up new service on a point to point basis for lucrative business routes.

Concerns by new entrants that incumbents with market power may buy up slots suitable for entry may also be reduced with a periodic auction. As the deregulated domestic airline industry has developed in the US, many incumbent airlines face relatively little competition on routes between some HDTAs and their hub because the network advantages of the existing hub carrier (such as feed from connecting flights) can make point to point entry unprofitable even for an airline with lower per mile seat costs.⁷ When a low cost carrier attempts to establish a competing hub operation, however, the prospect of entry on a competing city pair between the entrant's hub and the HDTA becomes much more likely, and the corresponding advantages of expenditures on entry deterrence by the incumbent increase.

When an incumbent has market power on a particular route, a periodic auction would affect the cost the incumbent would have to pay to pursue an anticompetitive strategy by outbidding potential entrants. Under the current system, an incumbent interested in protecting certain routes does not have to buy up all surplus slots that come on the market. Small numbers of slots do not present a threat to traffic on lucrative business routes because without adequate frequency, an entrant will generally be unsuccessful in competing with an incumbent. Similarly, slots traded or sold between existing incumbents at an airport often do not represent a threat of new entry because with their hub and spoke structures, many incumbents do not compete on nonstop routings to the same HDTA. With a periodic auction, however, all slots would become available over time, and a strategy of buying up slots for less valuable uses in order to preclude entry would become much more expensive.

The existing system whereby the seller knows who is bidding on the slots also makes entry deterrence by incumbents more likely than under a periodic auction where the identity (and even the number) of potential buyers could be concealed. As noted above, knowing the identity of a bidder is often the equivalent of knowing the likely use of a particular set of slots. Thus, sellers of slots can use the identity of a potential entrant to solicit a counter offer from an incumbent that would be threatened by entry. In contrast, if the incumbent is uncertain about who is bidding on a set of slots, there will be less incentive to bid up the slots for anticompetitive reasons. Although blind bidding in periodic auctions can increase the cost of entry deterrence, periodic auctions cannot eliminate the possibility that an incumbent

will use slot purchases to acquire market power or prevent entry. If entry deterrence is sufficiently profitable, then an incumbent may still be willing to buy up spare slots over time in a periodic auction in the same way that an incumbent could buy up slots in the secondary market today.

Periodic auctions could discourage needed investments if slot holding were leased for too short a period of time. Consequently, periodic auctions must be designed carefully to balance the availability of slots with a reasonably long period of time during which an airline could establish service at an airport. There are sunk costs associated with entry on airline routes, and airport authorities also may have difficulty making the necessary adjustments to accommodate excessive turnover at any one time. Nevertheless, if (for example) 10 per cent of an airport's capacity became available each year under a 10 year lease, the vast majority of all flights at any airport would be unaffected, especially since existing users of the slots being put up to bid might well reacquire some of the slots if they offer the most efficient service.

Conclusion

Permitting the buying and selling of airport capacity (with or without a periodic auction) will not solve all problems at capacity constrained airports. Depending upon an airport's rules, for example, a new entrant may find that obtaining space at gates is difficult unless the airport authority possesses either extra capacity or the ability to order airlines to move to promote efficient use of its facilities. A buy/sell rule also is not a substitute for antitrust enforcement. If a carrier acquires market power at an airport, then market mechanisms will not correct such situations automatically. In setting up any buy/sell rule, however, governments may want to consider whether they can establish some firm rules regarding limits on how many slots one airline can acquire. Those rules might vary depending upon how the airport is used, and the expected likelihood of anticompetitive problems. In the long run, however, both airlines and consumers will benefit from having an effective and efficient slot allocation system that permits entry and competition between airlines.

NOTES

- 1 These studies were conducted in response to an invitation by the Federal Aviation Administration to participate in its proceedings that proposed changes or expansion of the HDR. The FTC staff comments submitted to the FAA in November, 1991 ("1991 FTC Staff Comments") and November, 1994 ("1994 FTC Staff Comments") will be made available as room documents at the June 19, 1997 meeting of WP2.
- 2 The FTC staff also used multiple regression analysis to test the anticompetitive hypotheses. The results did not generally support the two anticompetitive hypotheses examined.
- 3 Carriers that acquire slots in the secondary market do pay for them.
- 4 See Ronald Coase, "The Problem of Social Cost," 3 *J. Law & Econ.* 1 (1960).
- 5 At US airports subject to HDR, the available capacity has been further subdivided into two categories: slots for jet aircraft and slots for commuter aircraft. Commuter aircraft can be flown in jet slots but jet aircraft cannot use commuter slots without permission from the FAA. The policy of subdividing types of slots was designed to preserve some service from smaller, relatively nearby communities to major airports that would not justify operation of jet aircraft. Since commuter aircraft are smaller than jet aircraft, special commuter slots do not maximize passenger capacity at the airport.
- 6 International slots in the U.S. are outside the buy/sell process so that the government can assure that route rights granted to foreign carriers under bilateral agreements are exercisable.
- 7 These advantages are not necessarily related to possession by an airline of a large number of slots at any one HDTA. If an incumbent airline initially possessed only enough slots to serve the route between its hub and the HDTA, it would not have enough slots to trigger antitrust scrutiny. Such a carrier would have the same incentive as any other carrier to attempt to preclude entry on such a route.

ANNEX I : GROUND HANDLING SERVICES

Virtually all U.S. airports with commercial service have accepted either surplus federal land or federal Airport Improvement Grants or both. By accepting federal assistance, these airports agree to follow federal rules governing the provision and availability of ground handling services. Specific statutory provisions apply as well as assurances that must be given when a grant is accepted.

One federal rule prohibits airports from granting exclusive rights to any service providers. This exclusive rights prohibition applies so long as the airport is operated as an airport, and applies whether the exclusive right results from an express agreement, from the imposition of unreasonable standards or requirements, or by any other means. However, the mere fact that only one enterprise engages in any aeronautical activity at an airport would not violate the exclusive rights prohibition. In many instances, the volume of business may not be sufficient to attract more than one such enterprise. As long as the opportunity to engage in an aeronautical activity is available to those meeting reasonable qualifications and standards relevant to such activity, the fact that only one enterprise takes advantage of the opportunity does not constitute the grant of an exclusive right.

The grant assurance on exclusive rights recognizes that space considerations could affect operations by more than one service provider. The grant assurance states that:

a person providing, or intending to provide, aeronautical services to the public will not be given an exclusive right to use the airport, with a right given to only one fixed-base operator to provide services at an airport deemed not to be an exclusive right if --

- (a) the right would be unreasonably costly, burdensome, or impractical for more than one fixed-base operator to provide the services; and
- (b) allowing more than one fixed-base operator to provide the services would require reducing the space leased under an existing agreement between the one fixed-base operator and the airport owner or operator; ...

However, the leasing to one enterprise of all available airport land and improvements planned for aeronautical activities could be evidence of an intent to exclude unless it is demonstrated that the entire leased area is presently required, and will be immediately used, to conduct the activities contemplated by the lease.

The statutory provision against exclusive rights does not apply if the owner of a public-use airport elects to provide any or all of the aeronautical services needed by the public at an airport; *i.e.* owners may exercise but not grant an exclusive right to conduct any aeronautical activity. However, these owners must engage in such activities as principals using their own employees and resources. An independent commercial enterprise that has been designated as agent of the owner may not exercise nor be granted an exclusive right. Moreover, even if an airport owner decides to exercise an exclusive right, it may not refuse to allow an air carrier to service its own aircraft, as discussed below. As a practical matter, airports themselves do not in general perform ground handling functions as a monopoly provider, so the exclusive use prohibition typically governs.

With respect to airport charges to fixed-base operators, another grant assurance provides that fixed-base operators using the airport in a similar manner will be subject to the same charges. Charges to carriers for aeronautical activities by an airport must be reasonable and not unjustly discriminatory.

In addition to the prohibition against exclusive rights that provides the underpinning for third-party ground handling at an airport, a separate grant assurance requires an airport operator to allow each air carrier using such airport to service itself or to use any fixed-base operator that the airport allows to serve air carriers at the airport. This assurance extends for the life of the project for which the grant is given (not to exceed 20 years). Each new grant triggers a new assurance period. If the grant is used to acquire real property, the assurance obligation extends so long as the airport is in use as such. In the United States, U.S. airlines typically provide their own ground handling services.

The United States believes that the ability to control the quality of service at airports is an important consideration for airlines with respect to both their passenger and cargo services. Therefore, as a complement to the domestic regulatory regime, the provision of ground handling services is covered in U.S. international air services agreements. Under the U.S. model ground handling article, airlines are allowed to perform their own ground handling or, at their option, have some or all of these services provided by competing agents. These rights are subject only to physical constraints resulting from considerations of airport safety.

ANNEX II: AIRPORT REGULATION

Who Is the Airport Regulator? What Are its Main Tasks?

The Federal Aviation Act of 1958, recodified as Title 49 of the United States Code, established the Federal Aviation Administration (FAA) with broad responsibilities for the regulation of air commerce in the interest of safety and, among other things, the encouragement and development of civil aeronautics. Under these broad powers, the FAA seeks to achieve safety and efficiency of the nation's airport system through direct regulation and contractual obligations on airports in return for the use of federal grant-in-aid funds.

To fulfill this mission, the FAA performs a number of tasks including:

- Licenses and regulates all land airports that serve any scheduled passenger operation of an air carrier having an aircraft seating capacity of nine seats or more.
- Administers two Federal programs for the capital improvement of the airports: the Airport Improvement Grant Program and the Passenger Facility Charge Program.
- Develops standards for airport design, development, construction, maintenance, operation, safety and data.
- Develops programs to improve and enhance airport capacity.
- Administers airport programs pertaining to national airport planning, environmental, civil rights, and property transfers.

What Is the Prevailing Ownership Regime of Airport Infrastructure (Private/public, National/federal/local)? Are There Situations of Mixed Private/public Ownership? Do Airlines Own Significant Shares in Airports? Are Airports Within the Same Airport System Usually Owned And/or Operated by the Same Entity?

In the United States, the ownership regime covers a variety of organizational forms. To date, private involvement has been limited to the management and operation of airports. These services are performed under contract with a public owner and usually for a fee over a fixed term. However, while all airports used by commercial airlines are publicly owned, there are a few small general aviation recreational facilities in the United States that are privately owned. In addition, the U.S. Congress has authorized an experimental privatization program covering several airports to be selected from airports interested in participating in the experiment. United States cities operate airports through commissions, special departments of city governments, advisory boards or an aviation director answerable to a city government. County and state governments are also common agents of ownership and operation. The authority is another popular form of ownership. Similar to a private corporation, it attempts to manage an airport as a business, subject to the requirements imposed by federal law. Its board members are appointed by local elected officials.

Ownership of airports within airport systems can also vary. The same operating entity can own and operate a number of airports serving the same geographical market. Often, each airport attempts to serve a different segment of the market, i.e, domestic and international traffic or air carrier and general aviation. For example, three of the airports operated by the Port Authority of New York and New Jersey have different types of service: LaGuardia is primarily used for domestic services, Kennedy International Airport is primarily used for international services and Teterboro Airport is used for general aviation. Ownership of airports serving the same locality can also vary; for example, Dallas Fort Worth International Airport is owned and operated by the airport board, a creation of the Cities of Dallas and Fort Worth, Texas, and Dallas Love Field is owned and operated by the City of Dallas.

How Are Capacity Expansions Financed? Do Public Funds, Subsidies or Preferential Loan Conditions Play a Significant Role?

Capacity expansions are financed through five principal means:

- Bond Financing - sold at generally low interest rates and tax exempt, the bonds are backed by the issuing government authority and paid out of airport revenues.
- Federal Programs - these funds are generated from federally imposed and/or federally authorized user fees on various segments of the aviation system. Under the Airport Improvement Grant Program, airports are given Federal grants for eligible projects. The grants are funded from the airport and airway trust fund, which receives its revenues from the \$6 international departure tax, the 10 percent domestic ticket tax, the 6.25 percent tax on domestic air cargo waybills, and the tax on noncommercial aviation fuel. In addition, with the approval of the FAA, airports can pay for capacity expansion by imposing a \$1, \$2, or \$3 Passenger Facility Charge on passengers using the airport. The total amount that can be collected under this program cannot exceed the projected cost of the project.
- State Finances - these funds are generated from state taxes and the amount available for airport development can vary from state to state.
- Airport-generated funds - the size of the market and the airport's traffic base determines the airport's ability to make a profit or surplus. Most airport profits are normally derived from non-aeronautical businesses, such as stores, restaurants, and parking lots. In most cases, all airport revenues must be used for the capital and operating costs of the airport, the airport system, or other facilities owned by the airport owner directly and substantially related to air transportation.
- Airline and private investment - airlines and private investors make capital investments in some types of airport facilities, such as terminals and hangars. The cost of capital and the tax treatment of airport financing produces a market that is conducive to investment by airport users, although the availability of alternate sources of funds, such as passenger facilities charges, has lessened the importance of this source.

How Is Access to the Market for Airport Capacity Regulated? Is There a Separation Between the Owners of Airport Infrastructure and the Actual Airport Operators?

Virtually all airports used by commercial airlines have accepted federal grant funds. Federal law requires airports receiving such funds to give certain "assurances." Among other things, the airport must

agree to make its facilities available without discrimination and to charge only reasonable fees to aeronautical users of its facilities. Access to the market is treated on a first-come first-served basis. However, the FAA Office of the Chief Counsel has determined that a carrier may not be denied access to an airport solely based on the non-availability of currently existing facilities and that some arrangements for accommodation must be made if reasonably possible. Since the FAA determination, the great majority of new and expanded operations have been accommodated at U.S. airports.

Access to runway capacity at four U.S. airports (National Airport in Washington, DC, O'Hare Airport in Chicago, and LaGuardia and Kennedy Airports in New York) is governed by the High-Density Rule, and airlines must have operating slots to serve those airports. As described in more detail in the U.S. Delegation slot allocation paper, "domestic" slots, which may be used for either intra-U.S. or international flights, can be bought and sold freely. "International" slots, which may only be used for international flights, can only be traded on a one-for-one basis at the same airport. The FAA administers the slot system.

Access to non-runway infrastructure at the high-density airports, as well as other US airports, is generally governed by the airport management. In some cases, airlines have funded and operate their own terminals under arrangements with the airport management.

What Are the Main Features of Standard Licenses for Airport Operation (e.g. Fees Payable to the Licensor, Service Obligations, Extent of Exclusive Rights by License, If Any)? Are There Instances Where Several Different Companies Are Operating Separate Infrastructures Within the Same Airport?

As previously stated, the FAA licenses all air carrier airports in the United States. In addition, federal law requires that the fees charged aeronautical users for aeronautical use by any airport that has received federal grant funds or is publicly owned must be reasonable. Airports receiving federal grants must accept a number of other obligations, including the obligations not to engage in discrimination and not to grant any exclusive rights. Federal law also preempts state and local regulation of interstate air transportation and of airspace.

Forty-nine states have adopted airport enabling acts. These acts confer the powers necessary for local governments to establish, operate and regulate airports serving scheduled airlines as a "public" function. A few of the traditional proprietary powers of airport owners are:

- Acquire land for establishing or expanding an airport.
- Finance airport improvements.
- Impose fees, rentals and other charges on airport users.
- Promulgate regulations for the operation of the airport.
- Enter into contractual relationships with aeronautical users.

State law may also establish whether an airport owner can be considered a public utility, grant taxing and bonding authority, and allow the exercise of eminent domain powers.

At publicly owned airports, most operations conducted on the airport are carried out by private companies. Airlines usually manage and operate their own terminal facilities, service their own aircraft

and handle their passengers and cargo or contract with another airline for the performance of these services. In addition, fixed-base operators may provide ground handling services and support for general and corporate aviation, as well as some commercial operators, retail concessions, automobile parking and ground transportation. Of course, the size of these services and the number of service providers vary based on the size of the airport.

What Is the Regulatory Framework for Airport Charges (Landing and Takeoff Charges, Aircraft Parking Charges, Passenger Charges)? What Is the Degree of Freedom of the Airport Operator in Setting Charges? Are Charges Set by a Regulator? Are They Cost Related? Is Peak-load Pricing Allowed? To What Extent Do International Treaties Put Constraints on the Design of Airport Charges?

All airport charges are established by the airport owner. However, Federal law requires that rates for aeronautical use of the airport be reasonable and not unjustly discriminatory. It also requires, in most cases, that all revenues generated by a public airport must be expended for the capital or operating costs of the airport, the local airport system, or other facilities owned or operated by the airport owner or operator that are directly and substantially related to air transportation. In June 1996, the Department of Transportation and the FAA issued a Policy Statement Regarding Airport Rates and Charges that set out five principles that airports should ordinarily follow when setting aeronautical charges:

- In general, the Department of Transportation relies upon airport proprietors, aeronautical users, and the market and institutional arrangements within which they operate, to ensure compliance with applicable legal requirements. Direct Federal intervention will be available, however, where needed.
- Rates, fees, rentals, landing fees, and other service charges (“fees”) imposed on aeronautical users for aeronautical use of airport facilities (“aeronautical fees”) must be fair and reasonable.
- Aeronautical fees may not unjustly discriminate against aeronautical users or user groups.
- Airport proprietors must maintain a fee and rental structure that in the circumstances of the airport makes the airport as financially self-sustaining as possible.
- In accordance with relevant Federal statutory provisions governing the use of airport revenue, airport proprietors may expend revenue generated by the airport only for statutorily allowable purposes.

The Rates and Charges Policy specifically provides that “(a) properly structured peak pricing system that allocates limited resources using price during periods of congestion will not be considered to be unjustly discriminatory. An airport proprietor may, consistent with the policies expressed in this policy statement, establish fees that enhance the efficient utilization of the airport.”

In addition to issuing a Rates and Charges Policy Statement, the Department of Transportation has established expedited procedures for considering user charges if a significant dispute arises. The Department can determine whether or not the charges conform with Federal requirements, but it may not establish the level of the charge if the charge is not consistent. Federal policy requires that fees for the use of the airfield and public-use roadways be established on the basis of historic costs.

The specificity of the international obligations applying to airport charges imposed on airlines varies. The Chicago Convention requires that charges imposed or permitted to be imposed by a Contracting State on aircraft of another Contracting States shall not be higher than those imposed on its national aircraft performing similar international operations. The U.S. model aviation user charges article specifies that user charges, in addition to being assessed on a national treatment basis, shall be just, reasonable, not unjustly discriminatory, and equitably apportioned among categories of users. User charges may reflect, but shall not exceed, the full cost to the competent charging authority of providing the appropriate airport, airport environmental, air navigation, and aviation security facilities and services at the airport or within the airport system. Such full cost may include a reasonable return on assets, after depreciation. Facilities and services for which charges are made shall be provided on an efficient and economic basis. States must also encourage consultations between charging authorities and airlines, with adequate information being provided to permit an accurate review of the charges. The Department of Transportation took these international obligations into account when it adopted the Rates and Charges Policy Statement, discussed above, and its requirements are consistent with these international obligations.

EUROPEAN COMMISSION

The following elements are based on the provisional outline proposed for the roundtable discussion.

EC regulatory environment

In the European Community, Council Regulation (EEC) 95/93 defines a procedure for airport slot allocation. The basic principles of this procedure are the following:

- Member States carry out airport capacity surveys and designate congested airports as coordinated (close to the IATA definition of SMA airports) or fully coordinated (close to the IATA definition of SCR airports). Before designation, local rules or IATA rules apply;
- in each fully coordinated airport, a coordinator is in charge of allocating slots in an open, transparent and non-discriminatory way;
- each season, slots are allocated pursuant to the ‘grandfather rule’;
- ‘use it or lose it’ : an incumbent carrier may lose its grandfather right on a series of slots if it did not use more than 80 per cent of the series (70 per cent for non-regular services). Grandfather rights may not be withdrawn when specific circumstances justify failures to use slots;
- available slots (non attributed/newly created/withdrawn/given-up) are put in a ‘pool’. In the preliminary coordination phase, the coordinator must propose 50 per cent of the pool to new entrants as defined by Regulation 95/93, and 50 per cent of the pool to incumbent carriers. All carriers with 4 slots or less during the same day in a given airport are considered as new entrants (‘small entrants’). Other carriers (‘third carriers’) requesting slots for new direct services on routes within the European Community are considered as new entrants under the following conditions: (i) two carriers or less already provide air services on the route, (ii) the entrant has 4 slots or less for that service on the same day, (iii) taking into account all services to/from the same airport, the entrant has less than 3 per cent of the total number of slots in the airport on the same day (2 per cent in a system of airports);
- a carrier may use the slots it holds on the routes it wants and, accordingly, transfer one slot from one service to another. Two different carriers may exchange slots on a one for one basis.

In addition, carriers can take part in consultations (for example IATA scheduling conferences) to ensure an efficient allocation of slots and coordination of airports. Commission Regulation (EEC) 1617/93 has granted, under certain conditions coherent with Regulation 95/93, a group exemption pursuant Article 85(3) of the EC Treaty for such consultations. It is considered that arrangements on slot allocation at airports and airport scheduling can improve the utilization of airport capacity and airspace, facilitate air-traffic control and help to spread the supply of air transport services from the airport. However, if competition is not to be eliminated, entry to congested airports must remain possible. In order to provide a

satisfactory degree of security and transparency, such arrangements can only be accepted if all air carriers concerned can participate in the negotiations, and if the allocation is made on a non-discriminatory and transparent basis.

Both Council Regulation 95/93 and Commission Regulation 1617/93 will be revised according to their respective timetables.

Airport coordination process and IATA rules

Three phases can be distinguished during the coordination process:

Phase 1: before IATA scheduling conference - In each of the EC fully coordinated airports, operating and interested carriers send their requests for slots to the coordinator (grandfather slots, re-timed slots, new slots). The coordinator allocates the slots on the basis of Regulation 95/93 priority rules, IATA rules and local rules.

Phase 2 : IATA scheduling conference (June and November) - Carriers meet to exchange slots (on a one for one basis) in order to solve scheduling problems. Arrangements agreed by airlines during the talks are cleared by the coordinators who attend the conference.

Phase 3 : after IATA scheduling conferences - Unsatisfied carriers try to arrange the remaining problems with the assistance of coordinators. At this point, complaints can be sent to ad-hoc airport scheduling committees.

Slot allocation and competition between air transport services

Slot constraints mentioned in the proposed outlines are one category of airport infrastructure constraints affecting air services. Other constraints may come from departure gates, aircraft parking places, check-in desks, etc.

Slot (and gate) allocation attract particular attention because access to air transport markets to/from an airport depends on the availability of slots and gates. Shortage of slots/gates for new services comes from slot reservations for existing services ('grandfathering'). Given the investments involved, it must be recognised that operating carriers need a certain degree of security of access over a reasonable period.

However, grandfathering has a significant impact on the allocation of slots in congested airports: before liberalisation, historical incumbent carriers had preferential traffic rights and, as a consequence, received a large share of airport slots in their respective countries. In comparison, other carriers have very limited slot portfolios.

In the vast majority of large congested EC airports and large US airports (GAO report of 18.10.96, *Barriers to entry in the airline industry*), historical carriers have developed hubs. These incumbents often have more than 50 per cent of the total number of slots in their respective hubs (and most peak hour slots), while the second biggest slot holder has a share between 5 and 10 per cent and the third holder has a share lower than 5 per cent. London-Heathrow and Paris-Orly may also be worth mentioning. At Heathrow, British Airways has some 35 per cent of the slots and British Midland some 12 per cent, but the third holder, Lufthansa, has a share as low as 5 per cent. At Orly, the Air France Group

has a share around 50 per cent, but British Airways/TAT/Air Libert  in common have a share around 25 per cent.

Slot allocation affects competition in the air transport on different levels.

New entrants on short haul services (for example, intra-EC services) suffer from slot shortages at congested airports because profitable entries often require high daily frequencies (depending on total expected Pax, but no less than 2 round trips at peak hour for business passengers - morning and evening). Entrants on long haul services require fewer frequencies, often outside peak hours (See CAA report *CAP 644*). Therefore, as admitted by some coordinators, available slots in large congested airports tend to be spread among long-haul services which bring more passengers in the airport for each slot used.

First, short haul services have a higher proportion of fixed costs and, therefore, are usually less profitable than long haul services. Second, because of different legal environments concerning, on one side, domestic and intra-EC services (short-haul) and, on the other side, international extra-EC services (long-haul), the former are often more competitive than the latter. In this context, a greater risk of failure exists for short haul entrants and this risk is increased by unattractive schedules at congested airports.

New entrants are not the only ones to suffer from slot shortages. For example, incumbent carriers may be unable to increase their service frequencies as necessary. Incumbents may refrain from developing new services because this would require them to terminate other profitable services or strategic feeder services.

Network effects may also be taken into account. Historical carriers have organised their domestic, intra-EC or international networks around hubs based at the largest EC airports. Connecting traffic gives an advantage to the services provided by large networks over new point-to-point services. Airport congestion increases this competitive advantage as new entrants or small incumbents do not enjoy a high degree of flexibility in the use of their small slot portfolio. By contrast, larger incumbents can shift their slots from one service to another in order to adapt to evolving competitive environments.

Independent scheduler

An independent scheduler (or coordinator) provides a better guarantee for fair primary allocation decisions (phase 1). If an air carrier is the coordinator in a given congested airport, a conflict of interest exists (for example, on 25.11.1996, the Italian Competition Authority issued a decision against abusive acts of Alitalia acting as coordinator of Milano-Linate airport). As the coordination process involves thousands of allocation decisions in a very short period of time, discriminatory practices may often remain hidden.

Grandfathering

Grandfathering is equivalent to slot reservation unlimited in time. When an airport is not congested, grandfathering has no effect on competition. When demand is too high and the airport becomes congested, grandfathering guarantees that incumbent airlines can continue their services in the future. Due to high investment levels, a certain degree of security for existing services is justified.

However, in a context of persistent congestion, unlimited grandfathering creates a shortage of slots in the long term to the benefit of incumbent airlines. Outsiders cannot get access to the congested airport. High barriers to entry are created. The largest users of a congested airport benefit most from these

barriers to entry as they have the freedom to use the slots they hold for the air services they want. Oligopolistic or discriminatory behaviour may develop.

'Use-it or lose-it'

The 'use-it or lose-it' rule is an incentive for incumbent carriers to use their slots efficiently. When slots are lost, they must be put in the pool to be allocated on a non-discriminatory basis. In 1996, the British CAA studied the allocation process at Heathrow and Gatwick (*CAP 644*, table 2.3): the report shows that the pool is very limited and that the 'use it or lose it' rule leads to few slot withdrawals.

Incentives for slot hoarding

Slot hoarding is a consequence of grandfathering and network characteristics. If an air carrier operates a network from a given airport, even loss making services may bring a positive contribution to the overall network thanks to connecting passengers. In a congested airport, loss of slots will lead to fewer services or lower frequencies and, therefore, a smaller and less profitable network. The carrier losing its slots has a very small chance of finding future available slots at convenient times.

As incumbents can choose to use their slots on the services they want, they have an incentive to keep their slots for profitable opportunities.

An incumbent may also choose to prevent access of competitors.

These incentives are not directly linked to scheduling committees. Some analysis of slot markets in certain US airports show that incumbents airlines tend to hoard slots even in the absence of scheduling committees (GAO report of 18.10.96 *Barriers to entry in the airline industry*, p.5-6).

Mechanisms for re-allocation

Slot swapping (one for one in the same airport) cannot be compared to slot transfers (with or without financial compensation). Their objectives are different: slot transfer amounts to an allocation decision, including a right of access, whereas slot swapping does not involve any new access right but a right for re-timing.

Slot swapping allows carriers to adapt their schedules to their needs. The complexity of international airport coordination may require a re-timing freedom arising from slot swapping (IATA conferences). Abuses and anti-competitive behaviour are possible, but their impacts on competitors remain limited as, in principle, no right of access is involved in a swap of slots in the same airport. Alliances lead large carriers to segment their geographic activities among members. This geographical focus and the need to avoid double operations may give alliance members incentives to collude and transfer slots from one member to another.

In congested airports, transfers of slots amount to grants of access rights. In the EC, slot allocation is decided by a coordinator who must grant rights of access on a non-discriminatory basis. Absence of discrimination is not guaranteed if incumbents have the freedom to transfer or sell slots to the carriers they prefer, and therefore, decide on the right of access of other carriers. High barriers to entry induce 'club' effects and oligopolistic behaviour. Transfers of slots decided by incumbents can favour allied carriers and hurt competing carriers on the very long term (see GAO report of 18.10.96). Therefore, a fundamental question is whether unlimited grandfathering is compatible with slot buying and selling.

Alliances

Alliances do not alter the above-mentioned characteristics of slot transfers and slot swaps. In the context of big international alliances, barriers to entry and ‘club’ effects may reduce potential and existing competition on important routes (for example, routes linking congested ‘gateway’ airports at each end).

Slot hoarding may be hidden behind slot swapping, and sometimes slot transfers, between allied carriers.

Using markets for slot allocation

Market for permanent use of slots

Permanent use of a slot amounts to unlimited grandfathering. As there is a limited number of slots in a given airport on the same day, a market for permanent use of slots cannot be a perfect market with an unlimited supply potential. Several market failures can be listed (see GAO report of 18.10.96 and Coopers&Lybrand report of 17.10.1995 for the European Commission, chapter 2):

- permanent use may create a ‘club’ of incumbents who can discriminate against new entrants or prevent the development of competitors in the airport;
- permanent use leads to high levels of prices as the number of slots will remain limited in the very long term and slots can be used on any air service to/from the airport;
- demand for slots is not homogeneous: regional or short haul services are not as profitable as long-haul services; therefore, because of high prices set for international services, competitors on short-haul services may be led to rely on long-haul carriers to get slots; large networks may pay higher prices to use a slot on a short-haul ‘feeder’ service;
- in a non-liberalised environment, services with exclusive rights on certain international routes may be more profitable than others; protected carriers can afford slots at higher prices; in this context, it may be necessary to isolate slot allocations for non-liberalised international services (‘ring fencing’);
- the largest incumbents in a congested airport have no incentive to develop their services in less congested airports in the same area;
- market developments would depend on the initial allocation process: if incumbents received grandfather slots for free, they would benefit from more assets on their balance sheets, without any new investments to be repaid, while future buyers will have to make significant investments in slot purchases or will be led to cooperate with larger carriers in order to lease slots.

Network effects

Network effects may allow large airlines in congested airports to pay higher prices than others for at least two reasons:

- the transport service on which the buyer intends to use a new slot may be more profitable thanks to connecting traffic from/to its large network,
- the buyer may intend to prevent the development of new or stronger competitors for its existing services.

When assessing pricing distortions, restrictions on traffic rights imposed by bilateral agreements must also be taken into account.

Under certain conditions, market rules may bring benefits: a more flexible and efficient allocation. However, clear rules must be implemented in order to limit (i) discriminatory long-term effects of grandfathering and (ii) discrimination of counterparts in slot transactions.

Anonymous market

Due to the limited number of slots in a given airport, a market for permanent use of a slot cannot work as a perfect market based on efficient price setting. Incumbent carriers may choose to keep or sell a slot for different reasons, in particular the development of their own network compared to competing networks. Arrangements may involve non-price criteria like non-competition clauses or exchanges of slots in different airports.

Market discriminations have been observed in US airports (see GAO report of 18.10.96). Anonymous market or compulsory open tender procedures may reduce these discriminations.

However, long term effects of grandfather rights would not be addressed: in a first period, carriers with marginal operations in the airport would be one-off sellers, then, in a second period, the market would probably freeze as large incumbent airlines would not be willing to sell their slots. A slot leasing market would then develop (see GAO report of 18.10.96).

Slot leasing among carriers

Potential effects on air transport competition of airlines leasing slots to other airlines: (i) new entrants do not have sufficient guarantees to invest on long term operations, (ii) incumbents may discriminate between leasing airlines, (iii) if grandfather slots have been initially given for free, carriers leasing slots suffer from a financial disadvantage (see GAO report of 18.10.96).

Market for limited term (several year) use of a slot:

The US system of gate-leasing in non 'slot-controlled' airports may provide a useful example concerning time-limited usage rights.

Alliances

'Club' effects could worsen in a context of alliances. Markets for unlimited term use of slots do not offer remedies against high barriers to entry and discriminations.

If an alliance is led to sell some slots, competitors may not afford or may not have an interest in making significant investments in slots.

Buyers may be placed at a disadvantage, given the investments involved, if the selling carrier received its slots for free.

Other policy objectives

Favouring certain allocations

Priority allocation rules for new entrants or small incumbents may be justified when basic allocation rules are biased in favour of incumbents.

Grandfathering protects incumbents without any time limit. Therefore access to congested airports on a fair basis is denied to new entrants or small incumbents while large incumbents have a greater flexibility to use the slots they hold on the services they choose. As a consequence, a system of positive discrimination for the allocation of the few available slots may be justified to ensure a minimum level of competition.

However, it is very difficult to find objective criteria to define new entrants, small incumbents or low-cost entrants. A fair system of allocation and re-allocation of slots should not require positive discrimination.

Slots 'set aside' for flights to specific cities

Public interest may require specific rules to set aside slots for certain priority services. However, such specific rules should not undermine the main system of allocation.

Therefore, specific 'set aside' rules should be transparent and non-discriminatory (auctions). Slot set aside should not be used for other purposes or on a longer period than strictly required by public service obligations.

Building new infrastructures

Building adequate airport infrastructures to meet air carriers' needs would solve the worst congestion problems. However, obvious financial and environmental obstacles limit the possibility for a 'quick fix'.

Airport pricing policy

Airport pricing policies could shift carriers' slot requests or passengers' preferences from peak hours to off-peak periods or from the most congested airports to less congested airports in the same area.

A basic economic principle requires passengers to pay the price of their preferences. However, given the impact on the costs and prices of air services, and the low elasticity of schedule requirements to landing and take-off fees, peak-period pricing requires a full impact analysis (the pricing policy implemented in London airports could here provide a useful example).

Other airport charges (for example, passenger fees) should also be taken into account as landing and take-off fees are just one element of airport pricing policy.

BIAC

Statement of James F. Rill¹

Introduction

The allocation of airspace at high density airports poses the same types of issues confronted in considering appropriate methods for allocating other types of scarce assets (*e.g.*, radio spectrum and oil and gas exploration rights). It has been the experience of the United States that the creation of markets for the rights to such assets has contributed not to the dampening of competition but rather to its enhancement. The institution of markets for slots at slot-constrained airports in the United States has facilitated efficient use of scarce airport accommodations. Permitting the buying and selling of these operating licenses, moreover, is consistent with the principles of market economics.

The market-based allocation of slots is no exception to the truism that nothing is perfect. It is significantly better than any alternative, however, particularly when coupled with effective antitrust enforcement. Market-based slot allocation will not insure a perfectly efficient allocation of slots due to transactions costs and the possibility of the exercise of market power. Transactions costs, however, cannot be avoided under any allocation regime and are probably minimized through slot sales. The U.S. experience demonstrates that the possibility of the exercise of market power due to the use of market-based slot allocation is remote. Moreover, effective antitrust enforcement is more likely to prevent the undue creation or enhancement of market power than regulatory solutions such as the periodic re-auctioning of slots. In summary, market-based slot allocation is more efficient than the alternatives.

The paper first provides an overview of the various mechanisms employed to allocate slots at high density airports within the United States. After examining why the creation of a slot market enhances allocative efficiency, the paper then enumerates changes which could be implemented to enhance allocative efficiency even further. Hypotheses concerning the anticompetitive effects generated by the buying and selling of slots are then addressed. Analysis of empirical data by the Federal Trade Commission (FTC) indicates that there is no support for two posited types of anticompetitive effects flowing from the institution of a slot market in the United States. The paper next examines the ability of a regulatory regime to temper the goal of allocative efficiency with other social goals. The paper concludes with an examination of various alternatives to an unrestricted market-based slot allocation regime.

1 The author is the Vice-Chair of the Competition Law and Policy Committee (CLP) of the Business and Industry Advisory Committee (BIAC) to the OECD. Due to time constraints, this statement has not been circulated among all BIAC members and therefore has not received the formal approval of BIAC. The views contained in this statement are those of the author alone and reflect his experience as the Assistant Attorney General for the United States Department of Justice Antitrust Division and as a private practitioner.

Slot Regulation In The U.S.

The High Density Rule (HDR) was promulgated by the Federal Aviation Administration (FAA) in 1968¹ to address congestion, backup delays and noise pollution at five high density traffic airports (HDTAs) in the United States.² The rule establishes limitations on the number of operations (takeoffs and landings) permitted per hour or half hour and requires that each operation be supported by a "slot."³ The total number of allotted slots is determined by the airport's Instrument Flight Rule (IFR) capacity, defined as the airport's capacity when weather conditions preclude Visual Flight Rule (VFR) operation.⁴

The HDR recognizes three classes of operators: air carriers (except air taxis), scheduled air taxis (regional carriers and commuter carriers) and all other operators (including general aviation, charter, military and other nonscheduled operators). Although the HDR did allocate the total number of available slots among the three classes of operators, the rule did not provide for the allocation of slots to individual operators within each class.⁵

Slots within the air carrier and commuter carrier classes initially were allocated by scheduling committees composed of carriers authorized by the Civil Aeronautics Board to operate at the HDTAs. An air carrier scheduling committee and a commuter scheduling committee were established at each HDTA. These scheduling committees operated under a grant of antitrust immunity issued by the FAA.

The committee agreements under which the air carrier scheduling committees operated required unanimous agreement on carrier schedules. No provisions were made for resolving deadlocks arising from the absence of unanimous agreement among air carriers. In 1985, the FAA observed that "[a]s a result of the unanimity requirement and the lack of deadlock-breaking provisions, the air carrier scheduling committees have found it difficult in recent years to reach agreement on a schedule in full compliance with the High Density Rule."⁶ While the commuter carrier scheduling committee agreements did contain deadlock provisions, procedures at the four HDTAs were not uniform. Neither did the commuter carrier agreements contain clear provisions for the transfer of slots among carriers.⁷

In the event of a scheduling committee deadlock, the task of allocating slots fell to the FAA. In 1980, for example, New York Air requested the allocation of 20 slots from the Washington National scheduling committee to institute a New York-Washington shuttle service. When the scheduling committee reached an impasse, the FAA intervened and allocated 18 slots to the carrier.⁸

The FAA recognized that the scheduling committees were not "functioning in a manner which provides for the efficient allocation of slots, for rapid adjustment to market conditions and shifting carrier needs and preferences, for adequate opportunity for expansion of operations, or for new carriers to serve high density airports."⁹ This recognition led the Department of Transportation to solicit public comment regarding alternative slot allocation mechanisms.

In commenting upon the alternatives which had been proposed to replace this means of allocation, the Department of Justice (DOJ) noted the obligation of the Department of Transportation "to place maximum reliance on market forces to create a pro-competitive, efficient system of slot allocation"¹⁰ and stated that "[t]his goal of efficient, pro-competitive slot allocation can only be accomplished through an unrestricted buy/sell market . . ."¹¹

In fact, the FAA in 1982 experimented with a market-based slot allocation system to address scheduling inefficiencies arising during an air traffic controllers strike. This experimental program was successful in facilitating a number of needed adjustments. In the six weeks of the experimental buy-sell

program, over 300 slots were transferred and over 190 were sold.¹² The DOJ observed that these transfers "occurred because, despite the FAA's best intentions, the slots had not been allocated to their most productive users. Only the market could ensure that result."¹³

Following three regulatory proposals issued during a five-year period, the FAA adopted the Buy-Sell Rule in December 1985. The Buy-Sell Rule provided that, with the exception of Essential Air Service (EAS)¹⁴ and international slots, air carrier and commuter operator slots at the HDTAs could be bought, sold, traded and leased for any consideration.¹⁵ The initial allocation of the slots was accomplished through a grandfather clause which assigned previously allocated slots to the air carriers and commuter operators utilizing them on December 16, 1985.¹⁶ The rule also contained provisions for allocating unused slots by lottery.¹⁷

The Buy-Sell Rule does not grant a carrier an absolute right to the slots that it purchases. The FAA retains the right to repossess slots and characterizes a carrier's interest in its slots not as property rights but as operating privileges.¹⁸ For example, a use-or-lose provision contained in the Buy-Sell Rule provided that slots which were not utilized at least 65 percent of the time during a two-month period were to be withdrawn from the carrier and returned to the FAA.¹⁹ This provision was intended to make available to new entrants (or to carriers wishing to expand their presence at an HDTA) slots that were used only marginally by incumbent carriers. In addition to being withdrawn for underutilization, slots could be withdrawn from incumbent carriers to make slots available for international or EAS flights.²⁰

The Aviation Safety and Capacity Expansion Act of 1990 directed the Secretary of Transportation to consider slot allocation methods which would provide improved access for new entrants at HDTAs.²¹ As a result of this legislation, the HDR was amended in 1992 "to achieve maximum utilization of the high density airports' capacity and to enhance competition by affording new entrant and limited incumbent carriers greater access."²²

To further enhance competition at HDTAs, the 1992 revisions to the HDR provided that primary participation in slot lotteries was to be limited to new entrant and limited incumbent carriers.²³ As an additional safeguard, limitations were imposed on the resale of slots obtained in lotteries to insure that these slots "are actually used by new entrants or limited incumbent carriers, rather than immediately sold, leased, or traded to larger carriers."²⁴

The 1992 revisions to the HDR also sought to "encourage carriers to hold no more slots than their markets demand" by increasing the use-or-lose percentage from 65 to 80 percent.²⁵ This higher percentage was designed to force carriers to place underutilized slots on the market, thereby "improving efficiency and increasing potential access for new entrants without substantially disrupting existing air service."²⁶

Market Allocation of Slots Most Likely to Maximize Welfare

The existence of a slot market which permits carriers freely to buy, sell, trade or lease slots facilitates the transfer of slots to those carriers which value them the most, thereby maximizing the likelihood that the slots will be allocated to their most productive use.

Other things being equal, the value of a given flight increases as consumer demand for the flight increases. For example, slots which are situated in time periods which consumers value more highly will be sold at higher prices and lower valued flights will be moved to less desirable time slots. In this way, the slot market insures that the flights which are offered are those which consumers value the most.²⁷ As the FTC

observed in 1991, in the absence of market power, slot transfers represent an efficient reallocation from lower to higher valued uses.²⁸

The DOJ similarly has emphasized the efficiency derived from market-based slot allocation, noting that "[a]n unrestricted slot market will ensure, in the absence of market power, that slots will go to those carriers that can use them most productively because they have either the greatest passenger demand or the lowest operating costs."²⁹ Additionally, the DOJ noted that an unrestricted market would facilitate efficient entry, expansion and exit at high density airports.³⁰

In commenting upon proposed slot allocation alternatives, the FTC observed that the absence of a slot market poses a barrier to entry which permits incumbent carriers to maintain fares above average per-passenger costs without inducing entry.³¹ The creation of a relatively unrestricted market in slots permits "a new entrant to obtain marginally profitable slots from one carrier at a price which will allow the new entrant to compete in a market in which another carrier is maintaining a price above average cost."³² In the same vein, the DOJ commented that a slot market "would enable the incumbents and new entrants with the lowest costs and greatest passenger demand to obtain slots."³³

Additional Changes Would Make the HDR More Efficient

Restrictions on the transfer of slots diminish the allocative efficiency which could otherwise be achieved through the allocation of slots via a market mechanism. The amendments to the HDR enacted in 1992 impose restrictions upon the transfer of slots obtained by new entrants or limited incumbents through a lottery for two years following the lottery. In 1994, the FTC objected to these restrictions because any "restrictions on transfers following a lottery would perpetuate for two years allocations that might be inefficient."³⁴ Absent antitrust concerns, slot transfers represent efficient transfers of resources. The FTC suggested that, in lieu of a two-year ban on the transfer of slots, the FAA instead rely on measures which would disqualify from participating in future lotteries any carriers who previously had sold too quickly slots obtained in lotteries.³⁵

The creation of separate slot classes also diminishes allocative efficiency. As noted above, the HDR establishes three classes of operators and determines the number of slots available to each class of operators. The DOJ has urged the Department of Transportation to eliminate the separate slot pools for the different classes of operators to permit the more efficient use of scarce capacity at HDTAs.³⁶ This argument stems from the recognition that, in the absence of perfect information, a regulatory regime will be unable to allocate the optimal number of slots to each class of operators.³⁷ Employing a market mechanism to determine which services are offered in which quantities is much more likely to result in the optimal allocation of scarce airspace.³⁸

Preventing carriers from buying and selling international slots also diminishes allocative efficiency.³⁹ In commenting on whether the Buy-Sell Rule should apply to international operations, the DOJ argued against the exclusion of foreign operations from the coverage of the Buy-Sell Rule. The DOJ noted that doing so would reduce the supply (and increase the price) of domestic slots, thereby leading to the domestic carriers' subsidization of foreign carriers.⁴⁰ The DOJ and the Department of State also indicated that, within the appropriate framework, permitting the buying and selling of international slots would not violate international air service treaties.⁴¹

Market Allocation of Slots Does Not Lead to Diminished Competition

Much emphasis has been placed on the levels of concentration at HDTAs,⁴² which increased following implementation of the Buy-Sell Rule. The FTC in 1991 analyzed slot holdings at the HDTAs and concluded that "each of the HDTAs considered alone is either moderately or highly concentrated, according to the standards of the Department of Justice Merger Guidelines."⁴³ Similar findings were made by the FTC in 1994.⁴⁴

The existence of moderately high or high concentration levels at HDTAs cannot support the assertion, without more, that the incumbent carriers operating at these airports function in an oligopolistic manner. Moderately high or high concentration levels are a necessary but not sufficient condition for the fostering of oligopolistic conduct.

Indeed, the FTC has emphasized that the concentration levels at HDTAs may overstate the likelihood of anticompetitive effects. For example, the FTC observed that "an industry might be relatively concentrated because its larger firms are more efficient, not because they are less competitive. Thus, it is possible that only a few airlines hold a majority of the slots as a consequence of those carriers' greater efficiency."⁴⁵ This assertion is supported by evidence which indicates that, within the first six months following implementation of the slot market, the "two airlines that have had a net increase in slot use are among the most efficient users of the resource in producing air transportation . . . 'buy/sell' may be viewed as a great success in increasing the productive efficiency of slot use at O'Hare."⁴⁶

The FTC also noted that "the concentration figures for HDTAs may overstate the potential for anticompetitive activity because they do not describe antitrust markets."⁴⁷ Each of the HDTAs is located near a regional airport which is not governed by slot constraints, thereby leading the FTC to conclude that the flights originating at these airports can constrain the prices of flights originating at nearby HDTAs.⁴⁸

In commenting upon proposed alternatives for slot allocation, the FTC rejected the assertion that larger carriers would employ their resources to dominate markets. The FTC noted that a carrier or group of carriers attempting to monopolize markets would face competition from airports located near the HDTAs, leaving the opportunity for monopoly pricing "extremely limited."⁴⁹ Furthermore, accumulation of the "massive number of slots" that would be required successfully to monopolize a market could not be undertaken without detection by the antitrust authorities. The FTC concluded "that the use-or-lose provisions of the rule, in conjunction with existing antitrust laws, will be sufficient to deter anticompetitive behavior."⁵⁰

In 1991 and 1994, the FTC analyzed slot usage at HDTAs to determine the competitive impact of the HDR.⁵¹ Specifically, the FTC performed extensive empirical analyses to determine whether relevant statistical data were consistent with two theories of anticompetitive effects.

The first hypothesis tested by the FTC was based on the "standard analysis of market power in which dominant firms have a greater incentive to reduce output than do fringe firms. Standard theory predicts that smaller fringe firms will increase output in response to a contraction of output by the dominant firm."⁵² When applied within the context of a slot market, this theory predicts that "larger carriers would use their slots less intensively than the smaller fringe carriers would. If larger carriers have market power and exercise it in this manner, slot usage would be negatively related to the market share of the carrier using the slot."⁵³

In both 1991 and 1994, the FTC concluded that the data do not support the assertion that a carrier possessing a relatively large share of the slots at a slot-constrained airport will restrict its services

anticompetitively, either by hoarding its slots or by using its slots at a lower rate than carriers with smaller shares. In 1991, for example, the FTC noted that with few exceptions, "all slot holders at the four HDTAs, on average, used their slots at a rate more than twenty-five percentage points above the current FAA 'use or lose' threshold."⁵⁴ Similarly, in 1994, the FTC found that "slots held by firms with larger slot market shares appear to be used no less intensively than slots held by firms with smaller shares."⁵⁵ These data defy the conclusion that large incumbent carriers hoard their slots so as to prevent entry by more efficient competitors.

The second hypothesis tested by the FTC was that "dominant carriers would be unwilling to sell slots to potential new entrants at competitive rates but instead would lease their slots to selected other carriers, with the purpose of deterring entry by carriers likely to increase overall slot use."⁵⁶ This hypothesis predicts that carriers will select less efficient carriers to compete against them for the same passengers and will prevent entry by more efficient firms. The FTC concluded that this hypothesis would be supported by data indicating that dominant carriers were net lessors of slots and that the leased slots would be used "relatively less intensively than slots held and operated by the dominant carriers."⁵⁷

After examining data from the four HDTAs, the FTC in 1991 concluded that the results of its analysis "do not support the hypothesis that carriers with large slot shares cause anticompetitive harm through the way they lease slots to other carriers."⁵⁸ In 1994, the FTC similarly concluded that the results of its regression analysis did not provide support for the second hypothesis.⁵⁹ Thus, the empirical data analyzed by the FTC do not support the assertion that incumbent carriers have discriminated among leasing carriers so as to prevent entry by more efficient competitors.

It is noteworthy that the four HDTAs are less concentrated than most other major U.S. airports. For example, the highest share of operations held by a single carrier at an HDTA is the 46 percent share of slots held by United at O'Hare. Large carriers at other U.S. hub airports typically hold a share of operations much larger than United's share at O'Hare. This 46 percent share is also significantly lower than the share held by the dominant carrier at each major European airport other than London Heathrow and London Gatwick.

Although the likelihood of the exercise of market power through slot acquisition is remote, it may still be of concern in limited cases to the competition authorities. Those limited instances are best dealt with through the normal application of the antitrust laws. In the antitrust context, the sale of a slot is just like the sale of any other asset, which would be analyzed under the rule of reason framework similar to that articulated in the *Department of Justice and Federal Trade Commission Horizontal Merger Guidelines*.⁶⁰ There does not appear to be any reason to adopt special rules or procedures for dealing with antitrust concerns surrounding slots.

Market Allocation can be Tempered to Accommodate Other Values

In the absence of market power, an unrestricted market for slots facilitates the achievement of optimal allocative efficiency. When achieving allocative efficiency constitutes the sole goal of a regulatory regime, only restrictions stemming from a policy of curbing the exercise of market power should be placed on the buying, selling and leasing of slots.

The creation of a market for slots does not necessarily exclude consideration of competing values. The HDR in the United States, for example, has been tailored to accommodate goals other than allocative efficiency. It is important to note, however, that the DOJ and the FTC have argued that the achievement of

these other goals is inconsistent with the goal of allocative efficiency and have advocated the abolition of the restrictions discussed below.

The United States has enacted legislation to insure the "maintenance of a comprehensive . . . system of . . . airline service for small communities . . . with direct Federal assistance where appropriate."⁶¹ The Department of Transportation has tailored the HDR to further this element of national aviation policy by maintaining a separate slot category for commuter airlines and by providing for the withdrawal of slots from incumbent carriers for EAS flights.⁶² Slots obtained under the EAS program "may not be bought, sold, leased or otherwise transferred, except that such slots may be traded for other slots on a one-for-one basis at the same airport."⁶³

To honor the obligations imposed upon the United States under international air service treaties, the regulations implemented by the Department of Transportation create a separate regulatory regime for international slots.⁶⁴ Slots designated as international slots "may not be bought, sold, leased, or otherwise transferred, except that such a slot may be traded to another slot-holder on a one-for-one basis for a slot at the same airport in a different hour or half-hour period if the trade is for the purpose of conducting such an operation in a different hour or half-hour period."⁶⁵

Alternative Methods of Slot Reallocation

One alternative to a relatively free market for slots can be found in the use of peak and off-peak takeoff and landing fees. In assessing this alternative, the FTC in 1994 noted that "[t]he information requirements needed to implement peak-load pricing to allocate capacity efficiently could exceed the information requirements needed to implement slot-based regulation."⁶⁶ This observation led the FTC to conclude that "[t]he benefits of peak-load pricing over slot-based allocation are not apparent."⁶⁷

Another alternative to an unrestricted market-based slot allocation scheme lies in the periodic re-auctioning of slots. Under this allocation scheme, slots would be auctioned to the highest bidder for a term of years and re-auctioned following the expiration of that period.

The same benefits supposedly offered by the periodic re-auctioning of slots are achieved even more effectively with an unrestricted market-based slot allocation regime. For example, the periodic re-auctioning mechanism supposedly addresses the alleged difficulty experienced by entrants in obtaining slots at a slot-constrained airport by making some percentage of slots available each year. This same goal may be accomplished more efficiently through the use of a market-based allocation scheme which encompasses a use-or-lose provision. As noted in preceding paragraphs, this combination prevents hoarding by incumbents and facilitates entry by would-be competitors.

The period auctioning of slots is inferior to an unrestricted buy-sell regime for other reasons as well. For example, the uncertainty inherent in the ability to use slots for a limited term of years discourages entry and also discourages incumbent carriers from making socially desirable investments in airport facilities. Furthermore, it is likely that the auctioned slots would be purchased by the same carriers utilizing them prior to the auction, thereby resulting in the imposition of unnecessary transaction costs.

Because the periodic auctioning of slots is not needed to facilitate entry and is unlikely to change markedly the holdings of carriers, and instead creates uncertainty and discourages both entry and efficient capital investments, this allocation scheme is inferior to an unrestricted market-based allocation scheme.

NOTES

- 1 Although initially intended as a temporary measure, the High Density Rule was made permanent in 1973.

- 2 The five airports were Kennedy International Airport, Chicago O'Hare International Airport, LaGuardia Airport, Washington National Airport and Newark International Airport. Although Newark remained classified as an HDTA, application of the HDR to operations at Newark was suspended in 1970.

- 3 A "slot" is defined as the authority to conduct one allocated Instrument Flight Rule (IFR) landing or takeoff operation during a specific period at one of the HDTAs. Department of Transportation Federal Aviation Administration, *High Density Traffic Airports; Slot Allocation and Transfer Methods*, Final Rule, 57 Fed. Reg. 37308, Docket No. 25758 (Aug. 18, 1992).

- 4 Department of Transportation Federal Aviation Administration, *High Density Traffic Airports; Slot Allocation and Transfer Methods*, Final Rule and Request for Comments, 50 Fed. Reg. 52180, 52181, Docket No. 24105 (Dec. 20, 1985). Instrument Flight Rules (IFR) govern procedures for conducting flights when the cloud ceiling is less than 1,000 feet and/or visibility is less than three miles. Visual Flight Rules (VFR) govern procedures for conducting aircraft operations when the cloud ceiling is higher than 1,000 feet and visibility is three miles or more. Airport capacity under VFR conditions generally is significantly higher than under IFR conditions. Department of Transportation, *Report to the Congress: A Study of the High Density Rule* 21 n.1 (May 1995).

- 5 50 Fed. Reg. 52180, 52181.

- 6 *Id.*

- 7 *Id.*

- 8 Eileen M. Gleimer, *Slot Regulation at High Density Airports: How Did We Get Here and Where Are We Going?*, 61 J. Air L. & Com. 877, 882-83 (May/June 1996).

- 9 50 Fed. Reg. 52180, 52181.

- 10 Comments of the United States Department of Justice Before the Federal Aviation Administration, Department of Transportation, on High Density Traffic Airports Slot Allocation Transfer Methods (Final Rule) and Slot Allocation: Initial Withdrawal and Redistribution of Slots (Notice of Proposed Rulemaking), Docket No. 24105, January 24, 1986, at 4 [hereinafter DOJ 1986 Comments].

- 11 *Id.* at 6.

- 12 See Gleimer at 884-85.

- 13 DOJ 1986 Comments at 7.

- 14 The Essential Air Service program was established to insure the maintenance of a system of air service for small communities.
- 15 50 Fed. Reg. 52180, 52182. Specifically, the Buy-Sell Rule provides that, with the exception of international and EAS slots, "slots may be bought, sold or leased for any consideration and any time period and they may be traded in any combination for slots at the same airport or any other high density airport." 14 C.F.R. § 93.221(a) (1997).
- 16 See 14 C.F.R. § 93.215 (1997). Some commenters objected to this method of initial allocation as bestowing a financial windfall upon incumbent carriers. 50 Fed. Reg. 52180, 52184. The Department of Transportation recognized the benefit to incumbent carriers resulting from its decision regarding the method to be used for initial allocation but stated that this one-time benefit was necessary to minimize disruption of existing service patterns and to recognize the investments in airport assets made by incumbent carriers. *Id.* The Coase Theorem implies, however, that in the absence of transaction costs, the initial allocation of rights does not affect the allocative efficiency of the final market allocation. Ronald Coase, *The Problem of Social Cost*, 3 J. Law & Econ. 1 (1960).
- 17 See 14 C.F.R. § 93.225 (1997).
- 18 14 C.F.R. Part 93.223(a) (1997) ("Slots do not represent a property right but represent an operating privilege subject to absolute FAA control. Slots may be withdrawn at any time to fulfill the Department's operational needs, such as providing slots for international or essential air service operations or eliminating slots.")
- 19 50 Fed. Reg. 52180, 52182.
- 20 See 50 Fed. Reg. 52180, 52182; 14 C.F.R. §§ 93.223 (1997).
- 21 49 U.S.C.A. § 40101(a)(13) (1997).
- 22 57 Fed. Reg. 37308, 37309. The rule defined limited incumbent carriers as "air carriers or commuter operators with fewer than 12 slots . . ." 57 Fed. Reg. 37308, 37311.
- 23 *Id.* at 37312. See 14 C.F.R. § 93.225(e), (h) (1997).
- 24 57 Fed. Reg. 37308, 37313. As implemented, the amendment provides that, until a slot obtained by a new entrant or incumbent carrier in a lottery has been used continuously for two years by the carrier, that slot may be sold or leased only to another new entrant or limited incumbent carrier and may be traded only for another slot or slots at the same airport. 57 Fed. Reg. 37308, 37311. See 14 C.F.R. § 93.221(a)(5) (1997).
- 25 57 Fed. Reg. 37308, 37310.
- 26 *Id.*
- 27 Comment of the Staff of the Bureau of Economics of the Federal Trade Commission Before the Federal Aviation Administration, Department of Transportation, on Study of the High Density Rule, Docket No. 27664, November 23, 1994, at 7 [hereinafter FTC 1994 Comments]. "[M]arket

determined prices provide important signals about resource allocation. In the context of the HDR, the prices at which slots trade inform decision makers of the social benefits of additional investments in capacity. Slots for peak demand time periods, when capacity will be fully utilized, ordinarily will be more expensive than slots for off-peak periods. By encouraging the shifting of lower-valued flights to off-peak times, this cost differential delays the need to make expensive additions to capacity." FTC 1994 Comments at 9.

28 Comments of the Staff of the Bureau of Economics of the Federal Trade Commission Before the Federal Aviation Administration, Department of Transportation, on High Density Traffic Airports: Slot Allocation and Transfer Methods, Docket No. 25758, November 15, 1991, at 3 [hereinafter FTC 1991 Comments].

29 DOJ 1986 Comments at 4.

30 *Id.*

31 50 Fed. Reg. 52180, 52185.

32 *Id.*

33 *Id.*

34 FTC 1994 Comments at 8. Similarly, the DOJ also has objected to restrictions on the transfer of slots obtained in lotteries. *See, e.g.*, DOJ 1986 Comments at 4, 10-11 ("The transfer restriction would prevent slots from being transferred immediately to [firms that can use them most productively] and therefore would delay the achievement of efficient distribution").

35 FTC 1991 Comments at 4.

36 *See* DOJ 1986 Comments at 12-15; Comments of the United States Department of Justice Before the Federal Aviation Administration, Department of Transportation, on Slot Allocation Alternative Methods (Notice of Proposed Rulemaking), Docket No. 24110 and Slot Transfer Methods (Notice of Proposed Rulemaking), Docket No. 24105, August 6, 1984.

37 DOJ 1986 Comments at 12-13.

38 *Id.*

39 As it is currently formulated, the HDR prohibits the buying and selling of international slots but permits the trading of international slots on a one-for-one basis for other international slots at the same airport. 14 C.F.R. § 93.217(a)(2) (1997).

40 50 Fed. Reg. 52180, 52186-87.

41 *Id.*

42 *See, e.g.*, U.S. General Accounting Office, *Airline Competition: Industry Operating and Marketing Practices Limit Market Entry*, U.S. General Accounting Office Report to Congressional Requesters, RCED 90-147 (1990).

43 FTC 1991 Comments at 13.

44 FTC 1994 Comments at 18.

45 FTC 1991 Comments at 17.

46 Severin Borenstein, *On the Efficiency of Competitive Markets for Operating Licenses*, 103 Q.J. Econ. 357, 377 (1988).

47 FTC 1991 Comments at 17.

48 *Id.* at 18.

49 50 Fed. Reg. 52180, 52186.

50 50 Fed. Reg. 52180, 52186. The procompetitive benefits of the use-or-lose requirement are emphasized in the 1992 amendments to the HDR. The Department of Transportation noted that in

"creating a stronger incentive for carriers to make underutilized slots available on the market, even on a part-time basis, the rule opens up some new competitive opportunities for new entrant and limited incumbent carriers. In economic terms, both the air traffic system and the carriers operating few or no flights to a high density airport can be expected to benefit from a rule that requires more efficient slot use: New entrants and limited incumbents can gain access to the airport or improve their competitive position by taking advantage of some previously underutilized slots; and the national system benefits from capturing more of the real economic value of some scarce resources (slots) that are only minimally used at present. The public is likely to gain as well -- both from the improved service and lower fares that additional competition should generate and, more broadly, from an improvement in economic efficiency at these critical airports (fewer wasted slots)."

57 Fed. Reg. 37308, 37313.

51 *See generally* FTC 1994 Comments; FTC 1991 Comments.

52 FTC 1994 Comments at 14.

53 *Id.* *See also* FTC 1991 Comments at 20.

54 FTC 1991 Comments at 24.

55 FTC 1994 Comments at 24. *See also* FTC 1994 Comments at 27 ("Slot usage rates among the carriers operating at each of the HDTAs does not appear to be inversely related to the number of slots operated by each carrier.")

56 FTC 1994 Comments at 14.

57 *Id.* at 15.

58 FTC 1991 Comments at 27.

- 59 FTC 1994 Comments at 47.
- 60 *Department of Justice and Federal Trade Commission Horizontal Merger Guidelines, reprinted in*
4 Trade Reg. Rep. (CCH) ¶ 13,104 (Apr. 17, 1997).
- 61 49 U.S.C. App. § 1302(a)(8) (1989).
- 62 14 C.F.R. §§ 93.219, 93.223 (1997).
- 63 14 C.F.R. § 93.219(a) (1997).
- 64 *See* 50 Fed. Reg. 52180, 52182. The regime governing the allocation of international slots is laid
out in 14 C.F.R. § 93.217 (1997).
- 65 14 C.F.R. § 93.217(a)(2) (1997).
- 66 FTC 1994 Comments at 3.
- 67 *Id.*

AIDE MEMOIRE OF THE DISCUSSION

Slot allocation and competition in air transport

The Chairman introduced the first session on how slots affect competition in air transport by noting that as is usual, in order to analyse competition issues in the allocation of slots, we must first define the relevant market. Is the relevant market the market for landing and take-off rights at a particular airport? or a particular city? a city-pair? or a city-pair at a certain time? The question of the appropriate market is complicated by the practice of hub-and-spoke operations. Under hub-and-spoke operations, flights between particular city pairs, as well as being final goods in themselves, can also be important inputs into the provision of air-transport services between other city-pairs. However, for certain time-sensitive passengers, an indirect flight (via a hub) will not be a perfect substitute for a direct (city to city) flight. To complicate matters further, there may be benefits from holding a portfolio of slots over-and-above the value of each slot in that portfolio. This is because, some passengers value flexibility over the time they travel. This need to obtain a portfolio of slots might act as a barrier to entry.

The US was asked whether, indeed, airlines need to obtain a portfolio of slots or whether entry can also be profitable and significant with a limited number of slots.

The US delegate responded that there are important network externalities associated with hub-and-spoke operation. The delegate was reluctant to go as far as saying that you cannot enter a market unless you have a certain critical mass, but, that does become increasingly difficult not to do so. This is because, when an airline has acquired enough slots to establish a hub-and-spoke network, each slot can be more efficiently utilised. Hub-and-spoke operation allows a larger number of destinations to be served with fewer individual flights (and therefore fewer slots). However, we should not overlook the experience of airlines such as Southwest Air which have been successful providing low-cost point-to-point shuttle services between cities in the south-west of the USA.

When the Federal Trade Commission investigated complaints surrounding slot allocations in the 1980s and early 1990s, they did not find evidence of competition problems. That investigation focused on such issues as whether or not large carriers were hoarding slots or were leasing them only to airlines that they thought would offer the least competitive pressure. The data did not tend to support this conclusion. However, complaints have continued in the intervening years.

The General Accounting Office has just completed a report suggesting that, in fact, there are problems – that it is getting increasingly difficult to assemble the needed mass of slots, particularly in the morning and evening hours. The Departments of Justice and Transportation are currently investigating this further. At this stage it is not possible to come to any final conclusions about whether the balance has tipped – whether the network effects of hub-and-spoke operations, and the resulting need for control over a relatively large number of slots, has made it impossible for small carriers to enter.

The Chairman emphasised that it is important to recognise that slots are not fixed in number. There are currently about 100 airports around the world for which slots are constrained for at least some period of time. But, even in those airports which are slot-constrained, the number of slots is not permanently fixed – the number of slots can be enlarged through reorganisation of existing facilities or through capacity expansion.

Market for slots and the incentive to expand airport capacity

An important role that slots allocation can play is guiding entrepreneurial decisions by airports to undertake capacity expansion. Over time the price of slots at congested times can be a signal to airports as to the value of expansion. It might seem, at first, that the usefulness of this signal would depend upon who owns the slots. It is clear that if the airport owns the slots, the airport will be able to reap the benefits of expanding capacity and selling off additional slots. However, some delegations stated that the airlines should own the slots. This does not necessarily diminish the role of the market for slots in providing incentives to the airport to expand capacity. Indeed, the economic literature on property rights states that (provided there are no transactions costs) the initial allocation of property rights is irrelevant to the final outcome. The allocation of property rights is just a matter of who gets the money. Provided there is a clear definition of the property right (and other transactions costs are low) the outcome of the market is independent of who is allocated the rights in the first place.

The US delegate took up the issue of the role of the market for slots in providing incentives for capacity expansion. The delegate noted that, in the United States, there are significant constraints to further expansion at the slot-constrained airports. Many of the slot constrained airports are located close to major cities. In addition, National (Washington), LaGuardia (New York) and O'Hare (Chicago) are bounded by water. Washington National is also subject to noise constraints - airlines are not permitted to take off or land after 10 p.m. at night. The question arises: given these constraints on time and space how can capacity be expanded? It was suggested that improvements in air traffic control might enhance capacity without compromising safety - for example, with improvements in technology and procedures, aircraft spacing might be reduced. Alternatively, improvements in engines (or installing hush-kits on existing engines) or changes in operating procedures might reduce noise to the extent that further operation at night is feasible.

The delegate also noted that it is not crucial that the property rights for new slots go to airports, in order to induce incentives for capacity expansion. When incumbent carriers anticipate being granted new rights in slots, they will, in some cases, finance the capacity expansion at an airport themselves.

In the case of two Washington airports, National and Dulles, when they were government-owned there was little incentive to expand capacity. Congress would simply never get around to appropriating funds for these airports. When these airports were put into the hands of an independent airport authority that had to the ability to issue its own bonds, incentives for expanding capacity were greatly improved. The question is how can the airport operator capture some of the returns from capacity expansion?

The Italian delegate commented that the current system gives almost no incentive to airport operators to invest optimally in capacity, since the airport usually is not permitted, by regulatory controls, to appropriate the value of its investments. The effect of these regulatory controls is to transfer the market power of the airport to the carriers. Most airports have a degree of market power over their own infrastructure and in the markets to which access to that infrastructure is essential in order to provide air services. In addition, in many airports there is a dominant air carrier, which has market power in the market for air services to and from that city. Since airport operators are typically prevented (through regulatory controls) from fixing charges to exploit that market power and since slots are distributed for little or no fee, the dominant air carrier is able, by setting its own charges, to appropriate the market power of the airport.

Many jurisdictions have introduced regulatory mechanisms or "corrections" to offset this effect, such as use-it-or-lose-it rules, incentives for new entrants, and so on. However, none of these corrections

addresses the basic issue that the current situation tends to perpetuate the constraint on capacity and does not give incentives to enlarge capacity.

One solution could be to assign the property rights over slots, (especially over newly-created slots), to airport operators, and allow airport operators freedom in setting charges for access to the infrastructure. However, it is possible that this could conflict with certain international obligations. Most airports cannot freely determine their own charges, either because of bilateral treaties or because of international guidelines set by the International Civil Aviation Organisation.

The Italian delegate asked whether it is possible to enhance the incentives on airport operators to adjust capacity by assigning them property rights over slots (at least new slots) and how, in this case, could the market power of the airports in the market for slots be efficiently controlled?

Finally, the delegate raised the question whether regulatory controls on airports might inhibit investment. Since investment in airport infrastructure involves a large fixed costs and is relatively risky, it is possible that airport operators may need to be left a degree of market power in order to maintain incentives for investment. Eliminating the market power of airport operators entirely might also eliminate the incentive to invest in necessary infrastructure.

The German delegate raised a question whether dominant incumbent airlines (“flag carriers”) have an incentive to increase the number of slots at a congested airport, especially if the new slots are going to be allocated to potential competitors.

The US delegate responded by pointing out that carriers (including dominant carriers) do have an interest in expanding capacity - large carriers expect to benefit from the increased capacity and the resulting increase in passengers. In the US, airports are allowed to assess “passenger facility” charges, which are small \$2 or \$3 fees per passenger using the airport, in order to fund airport expansions. We may think of airports as a form of shopping mall. A large component of the revenue of most airports comes from the purchases of the passengers who pass through. It would not be difficult to set up a system so that airports face incentives to enhance capacity in order to enhance the number of passengers passing through. This could probably be done without violating international obligations on airport charges.

Market for slots and efficient entry in air transport

In addition, to the role that the market for slots can play in providing incentives for efficient capacity expansion, the Chairman noted that there is another important incentive role of the market for slots - an efficient market for slots ensures that access to an airport is reserved to the most efficient airlines. With a liquid market for slots, an airline always has the choice of utilising a slot itself, or selling it to another airline. If another airline is more efficient than an existing airline it will be able to offer a higher price for the slot than the slot is worth to the incumbent.

In summary, the market for slots therefore plays two efficiency roles: ensuring that efficient airlines compete in the market and ensuring that the airport has efficient incentives to expand capacity.

The UK delegate addressed first the question of the incentive role of the slot market in expanding capacity. The delegate noted that if there is a market for slots and a positive price for slots (particularly slots at peak times) that market would provide, at least some, indirect signal to airports to enhance capacity. However, the delegate emphasised that, in his view, it would depend on who was assigned the property right in the slot (i.e., who gets the money for the slots). If the property right was given to the airports, as in the United States, the airports have a much stronger incentive to enlarge

capacity than if the property rights in the slots were given directly to the airlines. Nevertheless, the delegate concluded that if there was a market for slots that was sufficiently transparent, so that the airport or the government could observe the price, it would provide some indirect signals to enlarge capacity.

In the UK, improving the efficiency of airlines is the more important rationale for a market mechanism in slots. The UK delegate went on to distinguish between the primary and secondary market for slots (corresponding to the initial allocation to airlines and subsequent inter-airline trades, respectively). Starting with the primary market, the delegate observed that, clearly we would like to see the most efficient airline obtaining slots in the primary market, other things being equal. However, under the current situation in the UK, 50 per cent of the new slots are allocated to new entrants. These new entrants are often relatively inefficient airlines. In some cases they are flying to destinations which are already served by other airlines and where there is already quite a lot of competition in the market. Introducing a market mechanism at this, primary market, stage would introduce opportunities for more efficient airlines to obtain these slots.

The biggest gains from introducing a market mechanism occur in the secondary market - to assist airlines to trade amongst themselves more efficiently. The present market mechanism basically consists of barter - you have to find an airline that has a slot you want and that wants a slot you have (economists call this a "double coincidence of wants"). You are not even allowed to offer money in conjunction to the slot you are willing to trade. The establishment of a formal market would improve this process trading and would facilitate a greater number of trades between the airlines. Permitting a larger number of welfare-enhancing trades is the strongest benefit of introducing a secondary market for slots at existing airports.

The delegate added that it would be wrong to suggest that a market mechanism is a panacea. In particular, a market mechanism would not necessarily change the level of concentration at an airport. There are strong incentives for dominant airlines at each airport to hold onto slots. In addition, at strategic airports such as Heathrow, there is an incentive for airlines such as Lufthansa to hold onto slots in order to maintain a key link between Heathrow and the home-base in Germany.

The Italian delegate added a third regulatory objective - to minimise incentives for anticompetitive behaviour by airport operators or airlines. As yet, no country has addressed all of these objectives. Some countries have addressed the problem of efficiency by creating secondary markets for slots. Very few countries have addressed the problem of giving the right incentives to enlarge capacity. Very little progress has been made on trying to design the right incentives to limit anticompetitive behaviour in this sector.

The EC asserted that if a market for slots was introduced in Europe, the price for a slot at a congested airport would be extremely high. Maybe a better direction to proceed would be to ask how to set landing charges so as to give incentives for airlines to divert from congested airports to alternative airports in the same region.

Furthermore the delegate from the European Commission thought that, if a secondary market were to develop, issues of the definition of a slot would need to be addressed, including possible environmental elements and whether it should be term-limited. If we simply add to the system of grandfather rights a secondary market, then there are two fundamental problems: the incumbent airlines will decide who and where competing airlines will enter, and there is an asymmetry - incumbents get slots "for free" while subsequent entrants have to pay the secondary market price. Limited term slots would reduce this asymmetry and would reduce the price of slots.

The Italian delegate noted that the delegate from the European Union rightly pointed that there are important limits on expansion, due to environmental factors, urban planning constraints and so on. This is not necessarily an argument against establishing a secondary market for slots because one could imagine defining slots in such a way that the definition included certain environmental factors and standards. For example, an airline could be required to pay more for the operation of a noisier plane. The market for slots could be set up so that it provides incentives for the suppliers of slots to supply them at the lowest environmental cost and for those who demand slots to use them at the lowest environmental costs.

Competition among airports and take-off and landing charges

The Chairman noted that the EC introduced the important notion of competition between airports. This is an important factor as it is the case that in most of the congested airports around the world there is an alternative airport in the same region which is uncongested. This is true not only in the US, but also in Italy, where there is a congested airport at Milan, and a companion airport which is uncongested.

The German delegate, noted that inter-airport competition in Germany has not solved the problem of congestion. In Germany the airports are owned and operated by the federal Lands in which they are located. The airports are free to set their own charges for ground handling, slots, and so on. There are some differences in the charges, but these differences have not been large enough to reduce congestion. This is probably a result of strong consumer preferences. In any case, for inter-airport competition to work, you need more than one suitable airport for any given city. In the case of Frankfurt, the largest German airport, there is a significant congestion problem and no suitable alternative airports. In the case of Berlin there are three regional airports but even with improvements in infrastructure connections with the other airports it is difficult to induce airlines to switch. Clearly it is not just a matter of offering alternatives, you need to induce the airlines and the consumers to accept these alternatives.

The EC delegate commented that he understood that, under current rules in Germany, slot trading can only occur through straight one-for-one slot swaps (although, in practice, there may be some form of monetary compensation or some other agreement lying behind the slot swap). He then raised the question why airports should be prevented from charging significantly higher fees to airlines at peak hours. Presumably these fees would be passed on to customers, who could then choose between paying higher prices at peak times, or travelling at off-peak hours.

Germany replied that it is true that slot trading is not permitted in Germany, but, as was suggested, it is not that easy to detect or prevent. As an example, she pointed out that, in order to avoid competition on the route between Berlin and Frankfurt, Lufthansa once purchased a small airline (which was the only competitor on that route) in order to obtain its slots. In practice, airlines try to find ways to circumvent the prohibition on trading slots.

Regarding competition among airports the Italian delegate underlined the importance of airport charges. In particular one should distinguish between peak-load pricing to shift usage at a given airport to less congested times, and between pricing to shift usage from one airport to another. While airports in the US can compete for transit passengers, i.e., (in “competition between hubs”) this is much less developed in Europe where most passengers are on non-stop flights, so place more weight on such factors as ease of connection to the city.

The Chairman commented that there is also an important relationship between take-off and landing charges and the price of slots. If an airport was able to exert all its monopoly power in setting the right charge for every take-off and landing, the price of every slot would be zero, because the airport

operator would keep all the rent. The Chairman also pointed out that efficient regulatory controls on airport charges need not eliminate the incentives on the airport to invest in capacity.

The Swedish delegate noted that we are trying to achieve three objectives simultaneously: (1) to have an efficient allocation of slots among airlines (to make sure that the slot is allocated to the airline that makes the most valuable use of it); (2) to have fair competition between incumbents and new, small entrants; and (3) to have correct incentives for capacity expansion. Putting aside the third issue, it seems that the US solution, with trade in slots, effectively addresses the first objective, that is having efficient use of the slots. The European solution, which prohibits trade, is perhaps more efficient in solving the problem of “unfair” competition between the different sizes of airlines.

In order to have efficient trade in slots, we need well specified property-rights. That, in turn, requires that landing and take-off charges should be specified, as far as possible, in advance. One approach is to force airports to charge at average cost. This is, more or less, what is done today. However, if takeoff and landing charges are subject to peak-load pricing, the corresponding property rights are less clear and the value of buying a slot is reduced. If there were trade in slots, the market price of the slot would reflect the scarcity value of taking off and landing in peak hours. But this might worsen problems of competition among airlines of different sizes. One can think of there being two extreme models, at one extreme where airport charges are fixed at average cost and slots are traded, at the other extreme where airports exert their market power and charge the market-clearing price, so that slots have no value. Which of these solutions would provide the better incentives to expand capacity?

Market for slots and the organisation of auctions

The Chairman said that, in comparing the US system in which there is slot trading and the European system in which there is no trading, a major difference is that in the US all slots are put into the system, not just new slots. If the number of new slots, relative to the stock of old slots is very small, a system that allocates only the new slots is of limited effectiveness as it does not address the more significant inefficiencies in the allocation of existing slots. If airport charges are fixed at average cost, the scarcity rents are, essentially, gifted to the airlines and the airport, which has made the investment in the capacity, has its market power expropriated. The consumer doesn't benefit from this gift-giving, continuing to pay monopoly prices for air transport.

The BIAC representative noted that the business attitude in the US is that public property rights, whatever those rights are, should be freely marketable. This is the same position that is taken with respect to a number of other rights, including environmental permitting and spectrum allocation (such as the recent sale of PCS rights). This principle should apply to slot rights as well. In short, the market solution, although not perfect, will at least produce the most efficient result. There are some issues that have been raised concerning possible anti-competitive effects of the concentration of slots by the larger occupant airlines in slot constrained airports. One issue that has been raised is whether or not the principal airline user will hoard the slots, i.e., put them in the ice box and let them freeze for a while. This is an issue that was studied by the Federal Trade Commission in 1991 and 1994. Their analysis demonstrated that the use-frequency of slots by the principal airlines was higher in the high-density traffic airports (“HDTA”) than in the non-high-density traffic airports. The ice-box theory does not seem to be borne out in practice. In short, the evolution of whatever concentration there is in a HDTA could well be an efficiency resolution and not an anti-competitive result. In the event, it is clear that competition and antitrust enforcement should apply to slot transfers as it applies to everything else. Rule of reason analysis should be fully applicable to slot transfers, provided that the analysis is dynamic and takes into account neighbouring airports, looks at realistic market conditions and relates to careful market analysis.

The representative went on to suggest several improvements in the competitive framework that could be made: First, at slot-constrained airports, slots are allocated by the class of traffic - A certain number of slots are put aside for private aircraft, regional commuter traffic and international, as well as domestic, airline city traffic. This class system probably distorts the market. If it were eliminated the secondary market would be more efficient. This was attempted in 1992, but without success. Second, it would be beneficial to strengthen the use-it-or-lose-it rules to avoid the hoarding problem. The requirement is currently set at 80 per cent in the USA. It could be higher if hoarding is a serious problem. Lastly, airport charges could be adjusted to encourage higher charges for peak time slot access.

The US delegate turned to discuss auctions. Carriers make a significant investment in their slots. Each slot forms part of an entire network system designed to feed into other flights efficiently. Airlines also invest in gates and ground-handling services. In addition, there is a significant investment in marketing a new route. While some of this investment could be recovered if an airline were forced to give up its slots, much would be sunk. As a result, airlines would find the prospect of losing slots every two or five years very threatening. Would we be better off under a use-or-lose rule? Carriers do change their marketing strategies occasionally. A few carriers go bankrupt. As a result airports do get slots back from airlines. These returned slots could be auctioned. Alternatively, should we set a limit on the number of slots that an airline can hold?

The Chairman emphasised that the issue of limits on the terms of slots was very important. He noted that he had, in the past, been critical of limited duration rights in spectrum allocations, because the incentives to invest would disappear as the end of the period approached.

The EC delegate commented that no one is arguing that slots should only last two or five years. This would lead to a complete collapse of the international system. On the other hand, there is no reason to be afraid of a time constraint on slot rights. He noted that in many sectors there is simultaneously a need for significant investment and a limitation on the time period of the right to operate in that sector. Franchises in the railway sector are an example. He pointed out that, in US airports, gates are often leased for a fixed period of time. These gates are reallocated after a certain time, according to the prior arrangement with the airport. Also, there is a certain amount of leasing of slots at slot-constrained airports. There is no reason to forbid slot leasing, yet, the term of the lease arrangements limit the time that operators have to recover their investment on these routes.

With regard to a system where air carriers buy slots for a limited term, e.g. 8 years, the delegate from Sweden, from the Swedish Civil Aviation Administration, questioned whether such system is manageable. Unlike the case with fixed radio frequencies, air carriers must be able to adjust their schedules at a certain airport for many reasons, e.g. change of elapsed flight time to other airports, change of destination, change of the airport served at a city and change of arrival or departure times for important connecting flights. Thus, an originally required take off time would probably have to be changed several times during the 8 year period either by simple re-timing by the co-ordinator or by slot exchanges. Should the originally required departure time (which might belong to another carrier) be returned at the end of the period or should the actual departure time derived from the originally required time be returned? How should the necessary flexibility be dealt with without losing transparency?

The Italian delegate stated that in regard to competition analysis for slots, the relevant market to consider is not the market for slots itself but the market for city pairs within which the slots are used. A high concentration of slots at an airport would not necessarily mean that the airline has market power over *any* relevant city pairs. In regard to auctions, there is a potential problem in that there are strong demand externalities for slots, due to interdependence between carriers. (The value of a slot to an airline depends both on the other slots that it already holds and the slots held by its competitors). It is difficult to see how

these interdependencies would be handled in an auction. There may be analogies here with radio-frequency auctions that can be exploited. Finally, we should not overlook the fact that another possibility for re-allocating slots is through airline take-overs.

The Secretariat raised the question of the time limit on slot rights, noting, to begin with, that most discussions focus on a life of around ten years (and not two years as had been raised earlier). The question the Secretariat raised related to the final-period problem - the fact that airlines have very limited incentives to make route-specific investments as the end of the period approaches. One solution that has been suggested (from the literature on game theory) is to randomise the end of the period. The slot agreement would specify that the airline had the right to the slot for, say, at least 8 years and no more than 12 years, with an average of 10 years. Because, each year after the eighth and before the eleventh, the airline does not know for sure that it will lose the slot, it still has some incentive to make slot-specific investments. However, this incentive will, of course, be reduced relative to the situation where the airline's right to the slot is not limited in time. However, unless there is transparency in the random process, there may be a problem of credibility, as any one airline, facing a bad outcome, could allege favouritism on the part of another airline.

The US delegate reported that she had spoken with some Justice Department economists who were optimistic about the possibility of periodic auctions and the effect of the term of those auctions on investment decisions. Their position was that investment in services like ground services and baggage handling, especially at congested airports, are very easily transferable. There is no reason to think that a limitation on the life of slot would limit investment in these services. The only form of investment that we would be concerned about is the start-up cost that a new airline incurs in trying to enter a new route. It can take up to three years of losses before a new route breaks even. As a result, a two or five year life of a slot is probably too short. Ten years is probably enough.

The representative from BIAC picked up on the point that, in considering antitrust questions, the relevant market is not the market for the slot itself, but the market for the city-pairs in which that slot can be used. The representative noted that although this creates difficulties for competition authorities, these are not insurmountable as, at least in principle, competition authorities are as able to determine the likely city pair outcome of a particular slot transfer as the transferor would be able to determine the slot's likely use.

On the issue of allocating slots on the basis of "grandfather" rights, the BIAC representative noted that the incumbent airlines had already made a substantial investment in their routes, in gate handling, baggage transfer, building a viable network, promotions, and other costs that are required in developing an effective position. The incentive to make these investments would be disrupted if these airlines were not "grandfathered" in to the slot system. Material produced at the US Department of Justice while the representative was there suggested the use of grandfather rights in the initial allocation would not prevent efficient allocation of slots downstream, and would in fact, avoid disruption.

The representative went on to suggest that a randomised life of slot would not be efficient. He noted that there was a possibility that the slot-holder would invest as if the term of the slot was just eight years, thereby eliminating any efficiency gains from randomising the slot life. He noted that there are significant transactions costs associated with conducting and participating in an auction. Auctions are clumsy and costly. On the whole, the business view in the US is likely to be sceptical about limited-life slots.

The Chairman emphasised that investment is not a once-for-all event. Investment is a continuing process, occurring throughout the life of a company. As a result, the question of the “right” life of a slot is a very difficult question to assess.

Sweden asserted that there may be practical problems associated with infinite-life slots. For example if, as a result of environmental concerns, you wish to close an airport in 10 or 20 years, the existence of infinite-lived slots would (it was asserted) complicate such a closure. In addition, it was suggested that new technology may emerge which could allow, say, more efficient use of slots which may be able to be resisted by the incumbent holders of slots, if slots had an infinite life. These practical concerns suggest that it is better to have slots with a limited term.

Sweden, following on from the suggestion by the Italian delegate, noted that there are, in fact, important analogies between the issues that arise in auctions of landing slots and auctions of radio frequency spectrum. In particular, in both cases the value of one slot or one piece of spectrum depends on the other slots or other pieces of spectrum that the bidder expects to win in the auction process.

In regard to investment incentives towards the end of the life of the slot, the delegate drew an analogy with the market for commercial property. In that context it seems unreasonable to have a random duration of the term of the contract, as you would not know whether you would be evicted from one year to the next. The delegate also noted that one attractive property of holding an auction for slots is that it reduces the asymmetry between the incumbents and the entrants that arises when incumbents can acquire slots for free.

The Chairman acknowledged that there are important analogies between the market for slots and the market for commercial property. However, there are also differences. The market for commercial property is much larger than the market for slots. A firm typically has a large number of alternative sites to consider if the rent increases or if the lease is otherwise terminated. An airline may not have these alternatives.

The Chairman also noted that in order to provide airline service you need at least two slots - a takeoff slot and a landing slot. From this perspective it is very clear that slots have little value in themselves, but need to be combined with other slots to have value. Does this seriously affect the functioning of the market?

The US delegate went on to distinguish between auctions in the primary market and in the secondary market for slots. He noted his preference for an auction at the primary market stage, so that no airlines received a windfall gain, and so that the Treasury received the proceeds. He noted that the fact that there was not an auction initially (in 1967 in the US) does not reduce the efficiency of the secondary market. He urged EC countries who are allocating slots for the first time to consider auctions. He also underlined the comments of Sweden and Italy that, in order to be useful, slots may need to be combined to form city-pairs. In this respect, the situation is easier in the US where there are only four slot-constrained airports. As a result, typically only one end of any given city-pair combination is constrained.

The problem of slot allocation

The Japanese delegate noted that, in the case of Japan, slots have a life of 5 years. Although slots rarely become available at any major Japanese airport, recently one airport expanded and 80 new slots became available. These were distributed under the discretion of the Ministry Of Transport, using a system that was a compromise between a mechanical equal distribution between the three major airlines and a distribution in inverse proportion to the present market share. The three major airlines, ANA, JAL

and JAS have shares of the passenger market of roughly 50 per cent, 25 per cent and 20 per cent, respectively. An “inverse proportion” system would allocate 18 per cent of the slots to ANA, 36 per cent to JAL, and 45 per cent to JAS. A mechanical equal distribution of the 68 available slots would yield 23 each. If these two figures are averaged, ANA receives 18 slots (26 per cent), JAL 24 slots (35 per cent) and JAS 26 slots (38 per cent), which was the final outcome.

The French delegate responded by noting that the last time he had seen such an allocation system was in studying the International Electric Association of the 1950s, a cartel of heavy electrical equipment producers. Orders for this type of electrical equipment were lumpy and rare. The cartel members needed a mechanism to allocate these orders between themselves. This was exactly the mechanism they chose. If one repeats this exercise every five years, is it not true that in the long run each of the airlines will end up with exactly the same number of slots? Does this not assist in creating a cartel?

Japan responded that this rule will not necessarily be used in the future - it applies only to these 80 new slots that have become available. If other slots become available at other airports the new rule would not necessarily apply. The rule was not used, for example, in the case of slots that became available at Kansai airport a few years ago, although that was a different case because Kansai airport is an international airport and this was a domestic airport. Both the length of the life of the slots and the system of distribution could change in future.

Japan went on to note that the Ministry Of Transport decided to allocate 12 slots to newly emerging companies, i.e., companies that were non-existent at the time when it was known that new slots would become available. Although several groups have expressed interest none have incorporated yet. In the interim, these 12 slots have been distributed equally among the three incumbent airlines.

Korea reported that according to their definition they have just one slot-constrained airport, in Seoul. At present there is no formal market for slots. Slots cannot be leased by airlines and new slots are allocated on a first-come-first-served basis. However, slot swaps are possible. If an airline cannot obtain the slots it needs it can ask the slot allocator for the list of the slots and make an attempt to swap slots directly with the relevant airlines. A new airport is being constructed, to be completed around the year 2000, which will alleviate congestion.

Airport congestion and the value of slots

At this point the Chairman raised a new issue, the question of how one defines “congestion”? What does it mean for an airport to be “slot-constrained”? There are about 100 congested airports in the world. However, the number of slots that each airport is able to carry varies considerably from airport to airport. The EC has taken the approach of allowing member states to define which airports are congested. This gives rise to the possibility of strategic or opportunistic behaviour on the part of airport authorities who want to protect domestic dominant airlines - for example, defining an airport as congested may restrict the ability of new carriers to obtain landing rights.

The EC delegate stated that EC Regulation 95/1993 defines what are called “fully co-ordinated” and “co-ordinated” airports (which correspond, more or less, to congested airports), but it is up to the individual member states to designate airports as co-ordinated or fully co-ordinated. It is possible that member states may have incentives to favour their own national flag carriers, rather than the other objectives which states are required to respect, such as community integration and so on. There may be a need for greater transparency, to require states to specify why they did or did not choose to designate an airport as congested. In addition, we should note that, under IATA rules, IATA is able to designate an airport as congested, even if individual member states do not wish to do so.

The Italian delegate raised the question why this is a public policy issue at all. We have been discussing this issue as though the government would set the terms and conditions of slots and establish auctions, and so on. Would we not be better off leaving this as a matter for airports? Would they not then have the right incentives to allocate slots efficiently and to make efficient decisions about capacity expansion, and so on (provided, of course, we could control their market power some how). The problem with administrative slot allocation procedures (as in Japan) is that there is no guarantee at all that the resulting allocation will be efficient.

The delegate went on to raise a question. We presume that if we set up a market for slots, the airlines that use the slots most efficiently would have the highest willingness to pay and would obtain the slots. This is desirable because we presume there would be a correlation between willingness to pay and the total social surplus generated by the use of the slots. This presumption is right if slots are used in the same city pair markets. If slots can be used in a wide variety of different markets, this presumption is not necessarily correct, because these markets will have different demand conditions or will involve the use of different technologies by airlines, and so on. This mitigates, somewhat, the efficiency properties of the market mechanism for allocating slots. This was asserted in an article by Borenstein¹.

This can be illustrated in an example, if a slot can be used in two city-pair markets, one of which is, say, primarily of interest to business passengers and one of which is of primary interest to leisure passengers. It might be that the business city-pair is more profitable than the leisure city-pair, so that the airline flying that route would win the bidding for the slot. However, it could be that the total surplus from the leisure market is larger (for example, it may involve more passengers overall). The problem is that, in a situation of limited competition, there is no necessary correlation between the profitability of an individual firm and the total surplus.

The EC pointed out that, in practice, international services (in part due to the reduced competition on international routes) are often more profitable than domestic routes. Does this mean that in a slot market only international carriers will obtain slots, and regional airlines will not be able to survive?

The US delegate replied that, in part, this has been addressed through the mechanism of assigning a certain number of slots to each class of operator - major airlines, commuter services and private planes, with the expectation that commuter airlines would be serving regional areas where there are thinner streams of passengers and reduced demand. In part, this was done to address concerns of universal service which may not be as big a problem in the EC because of the existence of substitutes, such as the TGV.

Take-off and landing charges, market for slots and allocative efficiency: A summing up

The Norwegian delegate described the situation in Norway. In Norway only one airport is congested – Oslo airport. The system for allocating slots in Norway resembles the situation in other European countries, as it is based on the European regulations. Slots are allocated by a slot allocator, who allocates slots on a discretionary basis. He gives priority to scheduled airlines over charter airlines, longer flights over shorter flights, and so on. The Norwegian competition authority has advocated that, instead, a pricing mechanism for rationing access to the airport should be introduced. There are three possible means by which price signals could be introduced, two of them based on establishing an explicit market for slots:

1 Borenstein, Severin, "On the Efficiency of Competitive Markets for Operating Licenses", *Quarterly Journal of Economics*, vol 103, May 1988, pp 357-385.

First, the establishment of a secondary slot market; second, an auction of slots; third, by introducing airport charges.

With regard to establishing a secondary slot market, although this is an interesting proposal, there is a fear that the market will not be sufficiently liquid because the dominant airline will hold on to the slots rather than trade them. An auction mechanism seems a more promising approach. It is possible, however, that holding regular auctions would impose a heavy burden on regulatory authorities and be expensive to run. As a result, the Norwegian competition authority has instead advocated the use of airport charges to control congestion. One problem with using airport charges is that it is difficult to determine the shape of the demand curve, so it is quite difficult to fix the right charges. On the other hand, it avoids the problem of potential strategic market monopolisation by the dominant airlines. What is the problem with using airports charges to control congestion?

The UK delegate considered that landing charges could be effective at allocating slots to more efficient airlines, but was sceptical about whether landing charges would give airports an incentive to increase capacity, for a number of reasons:

First, the landing charges would have to be very high to encourage airlines to switch away from using Heathrow to other London airports. It is not just the question of customer preferences between airports. It is also the fact that in the largest airport of a city there is a huge “feed advantage”.

The second problem is that as soon as you introduce landing charges, you introduce a monopoly problem. A congested airport may be (but is not necessarily) a monopoly. Monopolies tend to reduce capacity rather than increase capacity. If the airport could price discriminate by, for example, providing different landing charges to different airlines it might be able to encourage greater use of the airport, but, in general, the airport would not want to expand capacity and drop landing charges.

Finally, the structure of ownership of airports is important. In London there is a structural problem in that all the London airports are owned by the same company. Therefore, if the landing charges rose at Heathrow, for example, to reflect the scarcity of slots at Heathrow, the airport owner has little incentive for increasing capacity at Heathrow because they know that airlines will just migrate to some of the other airports which they themselves own, and where there is excess capacity. (We can, note, however, that this would correspond to a more efficient use of resources).

The US delegate then raised the question whether airports have enough information to engage in peak-load pricing efficiently. Establishing efficient peak take-off and landing charges requires obtaining and processing a significant amount of information. The US delegate suggested that airports would get it wrong more often than right, which is why we come back to the possibility of a market in slots as an efficient means of allocating take-off and landing rights at peak times.

The US delegate also noted that he agreed with the UK that there are limits to how much you can shift demand between airports (at least in the short run) when airlines engage in hub-and-spoke operations. It will take a significant price change to induce an airline to select an alternative hub.

The Italian delegate made two comments on charges: First, another reason why charges may not be very effective is as follows. Where slots are produced by the airport and put in the market by the airport operator, the risk of investment falls on the purchaser of the slots. On the other hand when the only way that the airport operator can recover the value of its investment is through charges, the airport bears part of the risk, because the economic return on the investment is only recovered at the time of the use of the infrastructure. Second, if it is true that we would need very high airport charges to induce shifts across

airports, what would be the competitive effects on small entrants of these high airports charges? Would these charges affect new entrants more than incumbents?

Market allocation and slot co-ordinators: The institutional setting

At this point the Chairman directed the discussion towards the issue of the institutional setting of the co-ordinator. Who or what decides, and on what basis, how slots should be allocated? In many countries the co-ordinator is, in fact, an employee of the dominant airline, as in Norway and Poland. In Sweden, the co-ordinator was previously an employee of SAS, but, at present, co-ordination is carried out by an association of Swedish airlines. Until recently an employee of Alitalia was the co-ordinator in Italy. However, after allegations of abuse of dominance in allocating slots, and an investigation by the Italian competition authority, Alitalia handed this task to the Ministry of Transport.

The EC delegate emphasised that, to be sure, slot allocators can and do accurately trace slots. Slot allocators maintain databases which indicate at every point in time, which airlines hold rights over which slots. If two carriers agree to swap slots, they simply inform the slot allocator who makes the changes in the database. It is not a problem.

The delegate then raised a question about the interaction of slot allocations and international bilateral air services agreements. These agreements are negotiated by governments, who may or may not take into account the constraints of access to a given airport. Do we need to allocate slots specifically to the outcomes of these bilateral negotiations?

The Chairman emphasised that the UK submission states that the co-ordinator should be independent. In general we like independence, but in this context it is not entirely clear what independent means. Is it independence from airlines, independence from airports, or independence from both? It is not clear why, airports, if they do not have a stake in airlines (or, the other way around) could not perform the function of co-ordinator.

Poland noted that it was true that the co-ordinator of slots in Poland is an employee of the dominant airline. This co-ordinator is appointed by the Minister Of Transport. The appointee is required to follow guidelines, that require the co-ordinator to work in an impartial, objective and non-discriminatory way and that he should be completely neutral with regard to each airline.

The Chairman clarified that he did not mean to imply that the laws require the co-ordinator to behave in an opportunistic way. But, if you are an employee of a company, you are aware that you have important future career possibilities with that company and if you have given privileges to that company, you might expect something in return. It is not that there are rules that require it (or even allow it), but it is human to favour old acquaintances and relationships in the dominant airline.

In Norway, also, an employee of the dominant airline is the national slot co-ordinator. However, the primary approval for slots is made by the Civil Aviation Administration and their decisions may be appealed to the Minister Of Transport And Communications. There are regulations governing supervision of the decisions of the co-ordinator. In addition, there is a "co-ordination committee" consisting of representatives of the major airlines flying from the Oslo airport, which plays an "advisory" role. Unsurprisingly, the incumbent airlines do not complain about this system.

The delegate from Switzerland introduced himself as a representative of the national regulator. In Switzerland, also, it is the dominant airline, SwissAir, who acts as the co-ordinator for slot allocation, in collaboration with the airports. He commented that the working party should have met in Singapore

where the IATA slot allocation conference was simultaneously taking place. It is very interesting to follow the proceedings of such a conference with over 800 delegates from about 150-200 airlines. In Europe (outside the EC), there is not yet an open skies environment. Air traffic rights are granted based on air service agreements. The main concern of the Swiss delegate, as a regulator, was to ensure that any new system of slot allocation does not interfere with the current system of traffic rights granted by the respective governments or aeronautical authorities. Clearly there would be little point granting traffic rights to a foreign country, or a foreign airline if that airline is not in a position to obtain slots at the airports they want to serve. That is why slots should be distributed by the same authority as grants traffic rights.

The Chairman asked why the reverse should not be the case: If slots are the scarce resource (and traffic rights are not scarce). Should airlines not obtain slots first and then approach governments for traffic rights?

Switzerland replied that, in fact, airlines, do ensure that particular slots are available, before applying for traffic rights.

The delegate from Sweden, from the Civil Aviation Administration, returned to the question of the independence of the slot co-ordinator. Previously, in Sweden, the national airline SAS acted as a slot co-ordinator. This was a result of the historic system under which air service agreements were negotiated bilaterally. However, the national carrier used its own computerised scheduling system for the slot co-ordinating process. As a result, all of the slot information was available to the company whose employees had access to the requests from competitors. When an independent body was established, a separate computer system was set up to which all the airlines and the airport authorities were connected on an equal and non-discriminatory basis.

The Italian delegate recalled the experience in Italy. As the Chairman had said, in Italy the flag carrier previously acted as the co-ordinator but not anymore, thanks to an intervention by the antitrust authority. In fact, the airline resigned the role of co-ordinator even before knowing the outcome of the investigation. This was a result of the fact that with increasing competitive pressure, it was an increasing embarrassment for the flag carrier to have this role. Currently slot co-ordination is the responsibility of the Ministry who is supposed to create a new agency that will take over responsibility for this process.

We have talked about independence, but what does it mean, in practice? We can identify two aspects: one is funding, and the other is the administrative structure of the agency. The agency will probably have to be organised around a permanent staff who perform the day-to-day functions and some kind of consultative structure, or committee that will give advice to the co-ordinator. There are several proposals about how to form this consultative committee. Some say that it should be composed of airlines alone, others that it should be composed of airlines and airports operators. If airlines are included, membership should be open to all potential entrants, including foreign airlines. Therefore, this committee risks becoming a duplication of the IATA committees (whose outcomes depend on unanimity of the committee which is not necessarily efficient). In addition, this kind of committee gives rise to significant opportunities for collusion and agreement under the table. An alternative possibility would be to have only airport operators nominating the co-ordinator and overseeing the co-ordination function. This raises the question of vertical relationships between airports and dominant airlines. Unfortunately, in most of Europe, these vertical relationships remain very strong. However, in principle the airport operator could be a reasonably neutral slot allocator. It is not yet clear how, in the end, the slot co-ordination agency will be organised.

The EC delegate noted that the international slot allocation process has three phases: The first, phase, the primary slot allocation corresponds to the co-ordinator allocating slots to airlines. The second phase involves attending the IATA conference to exchange slots with other airlines. After the IATA conference, in the third phase, carriers can still come to arrangements between themselves with the agreement of the relevant co-ordinators.

The EC delegate went on to note that, for him, the real issue was transparency. With adequate transparency we can rely on the carriers who are denied slots to attempt to redress the situation. Up until now, the transparency of the slot allocation process has not been satisfactory.

The Austrian delegate, a representative of the Civil Aviation Authority of Austria, described the situation in Austria. There is a slot co-ordinator who is, indeed, an employee of Austrian airlines. At present Vienna airport is not congested. The Austrian view is that the problem of slot allocation is a problem specifically for very few European airports - London Heathrow, Frankfurt, Brussels, Paris, and Milan. Although Austria is interested to watch the development there and to observe the solutions. At present, the Austrian flag carrier would like to see the current situation remain as it is.

An important point to add is that if the co-ordinator acts in a biased manner (because he is an employee acting in the interests of the national airline) there is the possibility of tit-for-tat retaliation of slot co-ordinators at other airports. If Austrian airports treat the opponents of Austrian airlines (such as Lufthansa, or Malaysian Airways) unfairly then a slot co-ordinator in Zurich or Kuala Lumpur will be informed and will react immediately. Through this "traditional" bilateral mechanism, some sort of equilibrium will be reached.

The Chairman pointed out that this "tit-for-tat" retaliation can only apply with respect to foreign competition. A domestic airline seeking slots does not have a counterpart slot co-ordinator defending its interests. While it is true that as long as the major airports are uncongested, there will not be slot allocation problems, it is important that the right institutional setting be in place so that, when an airport eventually becomes congested, the decisions of the slot co-ordinator will be transparent enough so that we can be sure that no opportunistic behaviour is taking place.

Property rights and antitrust issues

The EC delegate noted that given the huge amount of data that the slot allocator is handling, the large volume of slot trades, and the typical lack of transparency, it may be very difficult for competition authorities to know whether any particular trade is anti-competitive or not.

In regard to the status of slot rights in the EC, the delegate noted that the airline rights were not in the nature of a property right, but merely an administrative concession. In fact, from a legal perspective it is probably the government who is the legal owner and not the airline.

The German delegate noted that in fact in Germany it is not clear who actually owns a slot. There is a concern in Germany that taking slots away from the airlines would constitute interference with proprietary rights, for which the government would have to pay compensation. Another concern is that, if we did allow the incumbent airlines, who acquired their slots through grandfather rights, to trade in slots, are we not establishing an asymmetry between the position of these airlines and the new entrants, who must pay the full market price for slots? Further, if the volume in the market for slots is relatively low (relative to the total stock), will there not be a problem that entrants will not be able to acquire the slots that they require in order to provide a viable service? Finally, there is a concern that the dominant incumbent airline can react to new entry by rescheduling an existing flight to depart a few minutes before

the entrant's flight, and (it was asserted) the incumbent can undercut the entrant by cross-subsidisation from other routes. It is no secret that the only serious competitor in Germany to Lufthansa, Deutsche Bayer, has been incurring losses for years.

The Chairman responded by noting that there is a distinction to be made between competitive behaviour and abuse. If the dominant firm is threatened, the dominant firm does not have to remain quiet and accept the consequences. In some instances, rescheduling flights to within a few minutes of the entrant's may be an abuse, if, for example, the new entrant, because of slot limitations does not have the possibility to do the same. In other circumstances, this will be a normal competitive reaction.

Conclusions

The Chairman concluded this part of the Roundtable by noting that the discussion was interesting, in part, because issues were addressed which did not have a simple solution.

One point that emerged, not as a unanimous view, but as a very important view of the majority, was that market mechanisms are an important instrument for the allocation of slots. In addition, it emerged that the precise nature of property rights in slots is important. Even though, it does not matter in theory how the property rights allocated initially, it is certainly very important that these property rights are specified clearly.

The incentive on airport authorities to enlarge capacity is also important. It is clear from the discussion that not all congested airports have the possibility to enlarge capacity. However, if the airport authorities are given property rights over slots, they will have efficient incentives to enlarge capacity.

Some airports have a regional monopoly. At these airports, the abuse of market power should be monitored closely. Australia has introduced an incentive system for airport regulation. Where competition between airlines is limited, regulation of the airport will have little effect as the profits will be just shifted from the airport authorities to the airlines, without any benefit for consumers.

Ideally, we would have efficient incentives for the airports to expand capacity, for efficient airlines to be selected to provide air services, and an absence of exploitation of market power.

In this regard regulatory authorities should make sure that airports do not exploit "too much" the market power they have. However they should not intervene, as they do now, in the way airport companies decide to use the overall market power they are allowed to exercise. It is certainly not efficient to strictly controlling take-off and landing charges and setting airport free to exercise their market power with respect to all other commercial operations that occur on the premises. Limits should be introduced with respect to the overall profits an airport should be allowed to gain, but within these overall limits the airport company should be left free to choose how to charge for the different services it supplies.

Competition Issues In Airport Ground Handling Services

The Chairman then moved to the second part of the roundtable, on competition issues in airport ground handling services. The Chairman raised several questions relating to limitations on entry. Who decides who enters and how many players should be in the markets? Is this a regulatory problem, or an antitrust problem?

From the submissions it is clear that in many countries airlines have the possibility of providing ground-handling services themselves ("self-provision"). It is important to recognise that self-provision is an important competitive threat to the airport authority, as it places an upper limit on the price and a lower limit on the quality that the incumbent ground handlers can provide, even if there is otherwise a local monopoly.

The French delegate pointed out that France did not submit a written document for this part of the roundtable because when they were making the decision whether or not to do so the French competition authority was asked to provide an opinion on a Bill to transpose EC Directive No. 96/67 (entitled "Services For Airplanes In Transit At The Airports Of The European Community") into French law. In the opinion of the competition authority, that Bill raised two main concerns:

- (1) First, the extent to which the Bill was in accordance with the provisions of the EC Directive which develops the principle of "generalised services". On this point the competition authority decided that it was by far preferable, from an economic point of view, to avoid wasting scarce resources, as may happen in the case of self-provision. Indeed, if ten large companies operate at the airport, and if each of these companies chooses self-provision, there will be ten lorries providing supplies, ten lorries providing maintenance services, and so on. The competition authority argued that it was preferable that there be only one provider of these services - either a third party or one of the existing companies. For this reason the principle of "generalised services" was supported by the authority.
- (2) Second, concerning the criteria of access to ground services. The first version of the Bill proposed only a single criterion - the volume of traffic - for determining how suppliers of ground services would be selected. The French competition authority suggested that the government adopt a different criterion - that the supplier who is prepared to pay the most, obtain the concession to provide ground handling services. It is too early to say whether the government will follow this opinion. So far the bill does not specify who will regulate the entry.

Norway noted that in its written submission it had described several cases. The common theme in these cases was restricted access to airport markets - specifically, markets for ground handling, car rental outlets and public telephone booths. The reason for the concern of the competition authority was that we suspected that the Civil Aviation Administration accepted fewer firms than was strictly necessary due to capacity constraints. Unfortunately, the Norwegian CAA is both the owner and the regulator of the airports. They receive income both from license fees and from airport trading and so on. There is a strong possibility that when they decide questions of access to the airport, they are primarily concerned with private business motives rather than economic efficiency and competition issues. The present system is not very satisfactory. The regulatory functions of the CAA should be separated from the ownership interest. There is some progress in this respect now.

The EC delegate made two comments on the problem of competition in ground handling: First, relating to access to the market, he noted that there is an EC Directive governing access to the market for ground handling. Airports may have reasons, on the grounds of capacity or efficiency, why the number of ground handlers should be restricted, but this must be proven in some way and analysed by the competent national authorities. A particular problem arises, however, when the airport is vertically-integrated into the business of providing ground-handling services. In this case the airport has strong incentives to increase the costs of the entrants (and extract any profits they earn) through access charges. This question is still unresolved by the EC directives.

The Chairman noted that where a vertically-integrated airport is required, by EC norms, to have a certain number of competitors, it will try to choose competitors that are not very competitive. Where regulation forces firms to introduce competition, the competition that is introduced may be false competition.

The Italian delegate pointed that whether or not the airport has an incentive to adopt exclusionary practices will depend on the nature of the regulation that it faces. In Italy, for instance, airport operators are heavily regulated on the airport side (take-off and landing charges and so on). On the other hand airport operators are not regulated in the fees that they can charge to the users of airports space. Under these circumstances, it is not clear that the airport would have an incentive to implement exclusionary practices.

There have been a number of antitrust cases in Italy, in both ground handling and other services, such as catering or security services, especially in the airports of Milan and Rome. In those cases it was found that there was indeed an abuse of a dominant position by the airport operator. These cases were particularly interesting in that the reason why the airport operator was trying to prevent the entry of other service providers was because there had been, in the past, rent sharing between the trade unions and the airports - the salaries of the ground-handling workers were completely out-of-line with the market. The airport sought to prevent entry in order to maintain this "coalition" with the trade unions. In those instances, the Italian antitrust agency used a provision of their law that explicitly provides for a right to self provision of services. The economies of scale in ground handling provision are not so great as to justify a system of competition for the market provided by a single operator. Indeed, the example of many northern European airports shows that it is perfectly possible to have a large number of different operators in these markets without any problem for the airports. In fact, if we carry out a price comparison, we find that prices are much lower at airports where competition exists, than at other airports.

The Italian delegate also noted an issue with bundling. Often airport operators require airlines to purchase a bundle of services even if they do not use those services themselves (perhaps because they engage in self-provision). In this regard, tariff unbundling is important as a way to ensure that competition can develop in these markets.

Switzerland noted that in Switzerland there is, in fact, a choice between two ground handling operators. However, airlines are only granted this choice on the condition that, in their home country, reciprocity is granted for Swiss carriers. If a foreign airline would like to have a choice between the two handling agents, then, at the most important airports in the home country of the airline, a similar choice must be offered to the Swiss carriers. In regard to the so-called "dedicated check-in" (introduced at the beginning of 1995), only airlines which achieve a certain percentage of the total passenger traffic at Swiss airports will be allowed to provide self-handling and "dedicated check-in". At Zurich airport, this threshold was fixed at 1.5 per cent of the total passenger traffic. At Geneva airport the threshold was fixed at 3 per cent. (There is a mistake in the Swiss submission, which specifies 4 per cent). If the Swiss, or foreign carrier meets this threshold it is allowed to provide self-handling for its flights and also for the flights of its code share partners, (on the condition that reciprocity is granted in the home country for Swiss carriers). Note that carriers that meet these thresholds are only allowed to provide for themselves (and their code-share partners) but not for third-party airlines.

Conclusions

In conclusion, the Chairman noted that in this part of the roundtable the competition aspects of ground handling emerged as of some importance. A second point to emerge was the importance of the separation between the person who decides which competitors will be introduced and the person who actually competes in the market against them. It is clear that, especially with EC requirements to have at least two operators at each airport, these issues will continue to keep us busy as competition authorities.

AIDE- MEMOIRE DE LA DISCUSSION

Attribution des créneaux et concurrence dans le transport aérien

Le Président ouvre la première session consacrée aux effets des créneaux sur la concurrence dans le transport aérien en indiquant que, comme à l'accoutumée, pour analyser les problèmes de concurrence dans l'attribution des créneaux, il faut d'abord définir le marché pertinent. Le marché pertinent est-il le marché des droits d'atterrissage et de décollage sur un aéroport particulier ? ou une ville particulière ? ou une paire de villes ? ou une paire de villes à un certain moment ? La question du marché pertinent est compliquée par les pratiques d'exploitation de réseaux en étoile. Dans l'exploitation de réseaux en étoile, les vols entre paires de villes particulières ne sont pas seulement des produits finaux mais ils peuvent aussi être des services intermédiaires pour la fourniture de services de transport aérien entre d'autres paires de villes. Cependant, pour certains passagers pressés par le temps, un vol indirect (passant par un aéroport pivot) ne sera pas un substitut parfait d'un vol direct (de ville à ville). Pour compliquer encore les choses, la détention d'un portefeuille de créneaux peut procurer des avantages qui dépassent la valeur de chaque créneau dans ce portefeuille. C'est pourquoi certains passagers privilégient la flexibilité par rapport à la durée du voyage. Cette nécessité d'obtenir un portefeuille de créneaux pourrait faire obstacle à l'entrée.

Il est demandé aux Etats-Unis si, de fait, les compagnies aériennes doivent obtenir un portefeuille ou si l'entrée peut aussi être rentable et importante avec un nombre limité de créneaux.

La déléguée des Etats-Unis répond que l'exploitation en étoile comporte d'importantes externalités de réseau. Elle n'ira pas jusqu'à dire que l'on ne peut pas entrer sur un marché si l'on n'a pas un certain poids décisif, mais que cela devient quand même de plus en plus difficile. Cela tient au fait que, lorsqu'une compagnie aérienne a acquis suffisamment de créneaux pour établir un réseau en étoile, elle peut utiliser chaque créneau de manière plus efficace. L'exploitation en étoile permet de desservir un plus grand nombre de destinations avec un plus petit nombre de vols différents (et donc avec un plus petit nombre de créneaux). Il ne faut pas, toutefois, passer sous silence l'expérience de compagnies telles que Southwest Air, qui a réussi à assurer des services peu coûteux de navette d'un point à un autre entre villes du sud-ouest des Etats-Unis.

Quand la Federal Trade Commission a enquêté sur des plaintes relatives aux attributions de créneaux horaires dans les années 80 et au début des années 90, elle n'a pas pu conclure à l'existence de problèmes de concurrence. L'enquête a porté sur des questions comme celle de savoir si les grands transporteurs accaparaient ou non les créneaux ou s'ils les louaient seulement aux compagnies qu'ils jugeaient les moins compétitives. Les chiffres n'ont généralement pas corroboré cette conclusion. Cependant, les plaintes ont continué dans l'intervalle.

Le General Accounting Office vient d'achever un rapport qui laisse penser qu'il y a, en fait, des problèmes -- en ce sens qu'il devient de plus en plus difficile de réunir la quantité de créneaux horaires nécessaire, en particulier le matin et le soir. Les ministères de la Justice et des Transports continuent d'enquêter sur ce point. A ce stade, il n'est pas possible d'arriver à une conclusion définitive sur la question de savoir si les effets de réseau de l'exploitation en étoile et, partant, la nécessité de contrôler un nombre relativement important de créneaux rendent impossible l'entrée de petits opérateurs.

Pour le Président, il importe de reconnaître que le nombre de créneaux horaires n'est pas fixe. Il y a actuellement une centaine d'aéroports dans le monde pour lesquels le nombre de créneaux est limité, du moins pour un certain temps. Cependant, même dans les aéroports où le nombre de créneaux est limité, cela n'est pas définitif -- le nombre de créneaux peut être augmenté par suite d'un réaménagement des installations existantes ou d'une expansion des capacités.

Le marché des créneaux et l'incitation à accroître la capacité aéroportuaire

L'attribution des créneaux peut jouer un rôle important dans la décision des aéroports d'accroître leurs capacités. Au fil du temps, le prix de créneaux en période de pointe peut indiquer qu'il y aurait avantage à agrandir les aéroports. Il pourrait sembler, de prime abord, que l'utilité de ce signal dépende de la question de savoir à qui appartiennent les créneaux. Il est évident que si les créneaux appartiennent à l'aéroport, ce dernier pourra récolter les avantages de l'expansion et de la vente de créneaux supplémentaires. Toutefois, certaines délégations pensent que les créneaux devraient appartenir aux compagnies aériennes. Cela ne réduit pas forcément le rôle du marché des créneaux comme source de signaux incitant les aéroports à s'agrandir. De fait, les ouvrages économiques sur les droits de propriété affirment que (pourvu qu'il n'y ait pas de coûts de transaction) l'attribution initiale des droits de propriété ne détermine en rien le résultat final. Dans l'attribution de droits de propriété, il s'agit simplement de savoir qui empêche l'argent. Dès lors qu'il existe une définition claire du droit de propriété (et que les autres coûts de transaction sont faibles) le résultat du marché est indépendant de la question de savoir qui a obtenu les droits au départ.

La déléguée des Etats-Unis aborde la question du rôle du marché des créneaux comme source d'incitations à l'expansion des capacités. Aux Etats-Unis, les possibilités d'extension des aéroports où il manque des créneaux sont très limitées. Bon nombre des aéroports manquant de créneaux sont situés à proximité de grandes villes. Par ailleurs, National (Washington), LaGuardia (New York) et O'Hare (Chicago) sont au bord de l'eau. L'aéroport National de Washington est aussi soumis à des contraintes en matière de bruit -- les compagnies aériennes ne sont pas autorisées à décoller ou à atterrir après 22 heures. La question qui se pose est la suivante : compte tenu de ces contraintes d'horaires et d'espace, comment agrandir les capacités aéroportuaires ? L'idée a été avancée que l'amélioration du contrôle de la circulation aérienne pourrait accroître la capacité sans compromettre la sécurité -- par exemple, avec une amélioration de la technologie et des méthodes, permettrait de réduire les intervalles entre les avions. Une autre possibilité serait, par des améliorations dans les moteurs (ou l'installation de silencieux sur les moteurs existants) ou des modifications dans les méthodes d'exploitation, de réduire le bruit et rendre ainsi possible la reprise de l'exploitation des aéroports, la nuit.

La déléguée américaine estime par ailleurs qu'il n'est pas indispensable que les droits de propriété des nouveaux créneaux aillent aux aéroports pour qu'il y ait incitation à accroître les capacités. Dans la perspective de l'obtention de nouveaux droits à créneaux, les opérateurs en place financeront parfois eux-mêmes l'agrandissement d'un aéroport.

Les deux aéroports de Washington, National et Dulles, n'avaient guère d'incitations à accroître leurs capacités lorsqu'ils appartenaient à l'Etat fédéral. Le Congrès n'arrivait simplement jamais à allouer des crédits pour ces aéroports. Lorsque ces aéroports ont été placés dans les mains d'une autorité aéroportuaire indépendante qui pouvait émettre ses propres obligations, les incitations à accroître les capacités ont été grandement renforcées. La question qui se pose est celle de savoir comment l'exploitant d'un aéroport peut s'approprier une partie des rendements de l'expansion des capacités.

Le délégué italien estime que le système actuel n'incite quasiment pas les exploitants d'aéroport à investir de façon optimale dans des capacités puisque l'aéroport n'est généralement pas autorisé, par les contrôles réglementaires, à s'approprier la valeur de ses investissements. Ces contrôles réglementaires ont pour effet de transférer le pouvoir de marché de l'aéroport aux transporteurs. La plupart des aéroports ont un certain pouvoir de marché sur leur propre infrastructure et sur les marchés pour lesquels l'accès à cette infrastructure est essentiel pour la fourniture de services aériens. Par ailleurs, dans de nombreux aéroports, il y a un opérateur dominant, qui a un pouvoir de marché sur le marché des services de transport aérien à destination et en provenance de cette ville. Comme les exploitants d'aéroport ne peuvent généralement pas (en raison des contrôles réglementaires) fixer les redevances pour l'exploitation de ce pouvoir de marché et que les créneaux sont attribués gratuitement ou pour un prix peu élevé, l'opérateur dominant est en mesure, en fixant ses propres tarifs, de s'approprier le pouvoir de marché de l'aéroport.

De nombreux pays ont mis en place des mécanismes de réglementation ou des "mesures correctives" afin de compenser cet effet, tels que des règles de péremption des droits inutilisés, des incitations pour les nouveaux entrants, etc. Cependant, aucune de ces mesures correctives ne résout le problème fondamental, à savoir que la situation actuelle tend à perpétuer la contrainte de capacité et n'incite pas à l'expansion.

Une solution pourrait être d'attribuer les droits de propriété des créneaux (surtout pour les créneaux nouvellement créés) aux exploitants d'aéroport et de laisser ces derniers libres de fixer les redevances d'accès à l'infrastructure. Cela pourrait toutefois être contraire à certaines obligations internationales. La plupart des aéroports ne peuvent pas déterminer librement leurs propres redevances, soit en raison de conventions bilatérales, soit en raison de principes directeurs internationaux fixés par l'Organisation de l'aviation civile internationale.

Le délégué italien demande s'il est possible d'inciter plus fortement les exploitants d'aéroport à ajuster les capacités en leur attribuant des droits de propriété sur les créneaux (du moins pour les nouveaux créneaux) et comment, dans ce cas, contrôler efficacement le pouvoir de marché des aéroports sur le marché des créneaux

Enfin, le délégué pose la question de savoir si des contrôles réglementaires sur les aéroports risquent d'entraver l'investissement. L'investissement en infrastructures aéroportuaires comportant des coûts fixes importants et étant relativement risqué, il faut peut-être laisser aux exploitants d'aéroport un certain pouvoir de marché pour maintenir les incitations à investir. La suppression totale du pouvoir de marché des exploitants d'aéroport risquerait aussi d'éliminer les incitations à investir dans l'infrastructure nécessaire.

La déléguée allemande demande si les compagnies aériennes dominantes en place ("compagnies sous pavillon national") sont incitées à augmenter le nombre de créneaux sur un aéroport encombré, surtout si les nouveaux créneaux sont attribués à des concurrents potentiels.

La déléguée des Etats-Unis répond que les transporteurs (notamment les compagnies dominantes) ont effectivement intérêt à accroître la capacité -- les grandes compagnies comptent profiter de la capacité accrue et de l'accroissement du nombre de passagers qui en résulte. Aux Etats-Unis, les aéroports sont autorisés à fixer les redevances d' "accès des passagers", qui sont d'un montant modique de 2-3 dollars par passager utilisant l'aéroport, afin de financer l'expansion des capacités. On peut considérer les aéroports comme une sorte de centre commercial. Les recettes de la plupart des aéroports proviennent, pour une grande part, des achats des passagers. Il ne serait pas difficile de créer un système tel que les aéroports soient incités à accroître leur capacité afin d'augmenter le nombre de passagers qui le

fréquentent. Cela pourrait sans doute se faire sans violation des obligations internationales en matière de redevances aéroportuaires.

Marché des créneaux et entrée efficiente dans le transport aérien

Outre le rôle que le marché des créneaux peut jouer en offrant des incitations à accroître les capacités, le Président signale un autre rôle important d'incitation, à savoir qu'un marché efficient des créneaux permet de réserver l'accès à un aéroport aux compagnies aériennes les plus efficientes. Avec un marché liquide, une compagnie a toujours le choix d'utiliser un créneau elle-même ou de le vendre à une autre. Si une autre compagnie est plus efficiente qu'une compagnie existante, elle sera en mesure d'offrir pour le créneau un prix plus élevé que la valeur qu'il a pour la compagnie en place.

En résumé, le marché des créneaux joue donc un double rôle du point de vue de l'efficience : il assure la concurrence entre compagnies aériennes efficientes sur le marché et il incite efficacement les aéroports à accroître leur capacité.

Le délégué du Royaume-Uni aborde en premier lieu la question du rôle incitatif du marché des créneaux dans l'expansion des capacités. Le délégué fait observer que s'il y a un marché des créneaux et un prix positif pour les créneaux (en particulier en période de pointe), le marché signale indirectement aux aéroports qu'il faut accroître la capacité. Toutefois, selon lui, cela dépend de la question de savoir à qui le droit de propriété du créneau est attribué (c'est-à-dire qui reçoit l'argent des créneaux). Si le droit de propriété est attribué aux aéroports, comme c'est le cas aux Etats-Unis, ces derniers sont beaucoup plus fortement incités à accroître leur capacité que si les droits de propriété des créneaux sont attribués directement aux compagnies aériennes. Néanmoins, s'il y a un marché des créneaux qui est suffisamment transparent pour que l'aéroport ou les pouvoirs publics puissent observer le prix, le marché signale indirectement la nécessité d'accroître les capacités.

Au Royaume-Uni, l'amélioration de l'efficience des compagnies aériennes est la principale raison qui motive la mise en place d'un mécanisme de marché des créneaux. Le délégué du Royaume-Uni distingue ensuite le marché primaire et le marché secondaire des créneaux (correspondant à l'attribution initiale de créneaux aux compagnies aériennes et aux échanges entre compagnies qui interviennent dans un deuxième temps, respectivement). Commencant par le marché primaire, le Délégué déclare que l'on souhaiterait évidemment voir la compagnie la plus efficiente obtenir des créneaux sur le marché primaire, toutes choses égales par ailleurs. Cependant, dans la situation actuelle au Royaume-Uni, 50 pour cent des nouveaux créneaux sont attribués à de nouveaux entrants. Ces nouveaux entrants sont souvent des compagnies relativement inefficientes. Dans certains cas, elles offrent des vols sur des destinations déjà desservies par d'autres compagnies et là où la concurrence est déjà forte sur le marché. La mise en place d'un mécanisme de marché à ce stade, le marché primaire, permettrait à des compagnies plus efficientes d'obtenir ces créneaux.

Les principaux avantages de la mise en place d'un mécanisme de marché sur le marché secondaire résident dans le fait que ce mécanisme aide les entreprises à effectuer entre elles des opérations d'échange plus efficientes. Le mécanisme de marché actuel consiste essentiellement en un système de troc -- il faut trouver une compagnie qui a un créneau que l'on veut et qui veut un créneau que l'on a (ce que les économistes appellent une "double coïncidence des souhaits"). On n'a même pas le droit d'offrir de l'argent pour le créneau que l'on veut échanger. La création d'un marché officiel améliorerait ces échanges et en faciliterait la multiplication entre les compagnies aériennes. Permettre une multiplication des échanges qui ont pour effet d'accroître le bien-être est le plus grand avantage de la création d'un marché secondaire des créneaux dans les aéroports existants.

Cependant il ne faut pas considérer un mécanisme de marché comme une panacée. En particulier, un tel mécanisme ne changerait pas forcément le degré de concentration dans un aéroport. Dans chaque aéroport, les compagnies dominantes sont fortement incitées à s'accrocher à leurs créneaux. Par ailleurs, à des aéroports stratégiques tels que Heathrow, des compagnies comme la Lufthansa sont incitées à conserver leurs créneaux afin de maintenir un lien essentiel entre Heathrow et le siège en Allemagne.

Le délégué italien ajoute un troisième objectif réglementaire : réduire au minimum les incitations au comportement anticoncurrentiel des exploitants d'aéroport ou des compagnies aériennes. Jusqu'à présent, aucun pays n'a cherché à atteindre tous ces objectifs. Certains ont cherché à résoudre le problème de l'efficacité en créant des marchés secondaires des créneaux. Très peu de pays ont tenté de régler le problème des incitations à offrir en faveur de l'accroissement des capacités. On n'a guère avancé du point de vue de la recherche des incitations qui permettraient de limiter les comportements anticoncurrentiels dans ce secteur.

Le délégué de la Commission européenne affirme que si un marché des créneaux était créé en Europe, le prix d'un créneau sur un aéroport encombré serait extrêmement élevé. Il vaudrait peut-être mieux se demander comment fixer les redevances d'atterrissage de manière à inciter les compagnies à se détourner des aéroports très chargés vers d'autres aéroports de la même région.

Par ailleurs, le délégué pense que, si un marché secondaire se développait, il faudrait chercher à donner une définition d'un créneau horaire, en tenant compte de possibles aspects environnementaux et en se demandant si un créneau doit être limité dans le temps. Si l'on se contente d'ajouter au système des droits acquis un marché secondaire, cela posera deux problèmes fondamentaux : les compagnies aériennes en place décideront quelles compagnies concurrentes pourront entrer et où, et il y aura une asymétrie en ce sens que les compagnies en place auront des créneaux "gratuitement" tandis que celles qui arriveront ensuite devront payer le prix du marché secondaire. La limitation des créneaux horaires dans le temps réduirait cette asymétrie et le prix des créneaux.

Le délégué italien note que son homologue de la l'Union européenne a fait observer à juste titre qu'il y a des limites importantes à l'expansion, en raison de facteurs environnementaux, de contraintes d'urbanisme etc. Ce n'est pas forcément un argument qui va à l'encontre de la création d'un marché secondaire car on pourrait imaginer de définir les créneaux en tenant compte de certains facteurs et normes écologiques. A titre d'exemple, une compagnie aérienne pourrait arriver à payer davantage pour l'exploitation d'un avion plus bruyant. Le marché des créneaux pourrait être conçu de manière à inciter les fournisseurs de créneaux à les offrir au moindre coût pour l'environnement et à ceux qui les utiliseront en causant le moins de nuisances pour l'environnement.

Concurrence entre aéroports et redevances de décollage et d'atterrissage

Le Président fait observer que la CE a introduit l'importante notion de concurrence entre aéroports. C'est un facteur essentiel car si l'on considère la plupart des aéroports encombrés du monde, il y a un autre aéroport moins chargé dans la même région. Cela vaut non seulement aux Etats-Unis, mais aussi en Italie, où il y a un aéroport encombré à Milan et un autre moins chargé.

De l'avis de la déléguée allemande, la concurrence entre aéroports en Allemagne n'a pas réglé le problème de l'encombrement. En Allemagne, les aéroports appartiennent aux Länder dans lesquels ils sont situés et ils sont exploités par ces Länder. Les aéroports fixent librement leurs propres redevances pour les services au sol, les créneaux horaires etc. Il y a des différences dans les tarifs, mais elles ne sont

pas assez grandes pour réduire l'encombrement. Cela tient probablement à des préférences marquées des utilisateurs. En tout cas, pour que la concurrence entre aéroports joue, il faut plusieurs aéroports substituables pour une ville donnée. Dans le cas de Francfort, le plus grand aéroport d'Allemagne, il existe un gros problème d'encombrement et il n'y a pas d'aéroport de substitution. Dans le cas de Berlin, il y a trois aéroports régionaux mais même si l'on améliore les voies d'accès aux autres aéroports, il est difficile d'amener les compagnies aériennes à changer d'aéroport. De toute évidence, ce n'est pas simplement une question d'offre de solutions de remplacement, il faut faire accepter ces solutions aux compagnies aériennes et aux utilisateurs.

Le délégué de la CE croit comprendre que, conformément aux règles actuelles en Allemagne, les échanges de créneaux ne peuvent se faire que par échange direct d'un créneau contre un autre (encore que, dans la pratique, il puisse y avoir une forme de compensation monétaire ou un autre accord régissant l'échange de créneaux). Il pose ensuite la question de savoir pourquoi il faudrait empêcher les aéroports de faire payer des redevances plus élevées aux compagnies en périodes de pointe. Il est probable que ces redevances seront répercutées sur les utilisateurs, qui pourront alors choisir entre payer plus cher en périodes de pointe ou voyager en périodes creuses.

La déléguée allemande répond qu'il est vrai que l'échange de créneaux n'est pas autorisé en Allemagne mais, comme il a été indiqué, il n'est pas facile de déceler ou d'empêcher cette pratique. Par exemple, afin d'éviter la concurrence sur la ligne Berlin-Francfort, la Lufthansa a acheté une petite compagnie aérienne (qui était la seule concurrente sur cette ligne) pour obtenir ses créneaux. Dans la pratique, les compagnies tentent de trouver des moyens de contourner l'interdiction d'échanger les créneaux.

S'agissant de la concurrence entre aéroports, le délégué italien souligne l'importance des redevances d'aéroport. En particulier, il faut distinguer entre l'application de tarifs de pointe, destinée à décaler l'utilisation d'un aéroport donné sur des périodes plus creuses, et la tarification destinée à inciter les compagnies à utiliser un autre aéroport. S'il est vrai qu'aux Etats-Unis les aéroports peuvent se faire concurrence pour les passagers en transit (concurrence entre les aéroports pivots), cette pratique est beaucoup moins développée en Europe, où la plupart des passagers empruntent des vols directs et attachent donc plus d'importance à des facteurs tels que la facilité de liaison avec leur ville de destination.

Le Président fait observer qu'il existe aussi une relation importante entre les redevances de décollage et d'atterrissage et le prix des créneaux. Si un aéroport pouvait exercer intégralement son pouvoir de monopole en fixant la juste redevance pour chaque décollage et atterrissage, le prix de chaque créneau serait nul car l'exploitant de l'aéroport conserverait la totalité de la rente. Par ailleurs, des contrôles réglementaires efficaces sur les redevances d'aéroport ne suppriment pas forcément les incitations pour les aéroports à accroître leur capacité.

Le délégué de la Suède note que l'on cherche à atteindre trois objectifs simultanément : (1) assurer une affectation efficiente des créneaux entre les compagnies aériennes (faire en sorte que le créneau soit attribué à la compagnie qui en fait le meilleur usage) ; (2) assurer une concurrence loyale entre les compagnies en place et les nouvelles, plus petites ; et (3) offrir des incitations efficaces en faveur de l'expansion des capacités. Si on laisse de côté le troisième point, il semble que la solution des Etats-Unis, avec l'échange de créneaux, permet d'atteindre efficacement le premier objectif, c'est-à-dire assurer une utilisation efficiente des créneaux. La solution européenne, qui interdit l'échange de créneaux, est peut-être plus efficace pour résoudre le problème de la concurrence "déloyale" entre compagnies aériennes de tailles différentes.

Pour assurer un échange efficient de créneaux horaires, il faut avoir des droits de propriété bien définis. Pour cela, il faut que les redevances d'atterrissage et de décollage soient, autant que possible, fixées à l'avance. Une solution consisterait à obliger les aéroports à appliquer un prix moyen. C'est plus ou moins ce qui se fait aujourd'hui. Cependant, si les redevances de décollage et d'atterrissage varient en fonction de la charge de l'aéroport, les droits de propriété correspondants sont moins clairs et l'intérêt d'acheter un créneau est moindre. S'il y avait des échanges de créneaux, le prix du créneau sur le marché serait fonction de la rareté des possibilités de décollage et d'atterrissage en périodes de pointe. Mais cela pourrait aggraver les problèmes de concurrence entre compagnies aériennes de tailles différentes. On peut imaginer deux modèles extrêmes : à un extrême, les redevances d'aéroport sont fixées au prix moyen et les créneaux peuvent s'échanger, et à l'autre extrême, les aéroports exercent leur pouvoir de marché et pratiquent le prix d'équilibre sur le marché, de sorte que les créneaux n'ont pas de valeur. Laquelle de ces deux solutions inciterait davantage à accroître la capacité ?

Marché des créneaux et adjudications

Selon le Président, lorsqu'on compare le système des Etats-Unis, où il y a échange de créneaux, et le système européen, où il n'y a pas d'échange de créneaux, une grande différence réside dans le fait qu'aux Etats-Unis tous les créneaux sont inclus dans le système, et pas seulement les nouveaux créneaux. Si le nombre de nouveaux créneaux par rapport aux anciens est très faible, un système consistant à n'attribuer que les nouveaux créneaux est d'une efficacité limitée car il ne supprime pas les sources importantes d'inefficacité dans l'affectation des créneaux existants. Si les redevances d'aéroport sont fixées au coût moyen, les rentes de rareté sont offertes essentiellement aux compagnies aériennes, et l'aéroport, qui a réalisé l'investissement de capacité, se voit privé de son pouvoir de marché. L'utilisateur ne profite pas de ce cadeau puisqu'il continue de payer le transport aérien au prix de monopole.

Le représentant du BIAC indique que les entreprises aux Etats-Unis estiment que les droits de propriété publics, quels qu'ils soient, doivent être négociables librement. Elles ont la même position en ce qui concerne un certain nombre d'autres droits, notamment les permis environnementaux et l'attribution de spectres (comme la récente vente de droits de PCS). Ce principe devrait s'appliquer aux droits à créneau également. En bref, la solution du marché, même si elle n'est pas parfaite, donne au moins le meilleur résultat. Certaines questions ont été soulevées concernant de possibles effets anticoncurrentiels de la concentration de créneaux par les grandes compagnies aériennes en place dans les aéroports ayant une pénurie de créneaux. Une des questions posées est celle de savoir si la principale compagnie fera ou non de la rétention de créneaux, c'est-à-dire si elle les gèlera pendant un certain temps. Cette question a été étudiée par la Federal Trade Commission en 1991 et 1994. Son analyse a montré que la fréquence d'utilisation des créneaux horaires par les principales compagnies aériennes est plus élevée dans les aéroports à forte densité de trafic que dans les autres. La théorie du gel ne semble pas s'appliquer dans la pratique. En bref, l'évolution d'une quelconque concentration dans un aéroport à forte densité de trafic pourrait fort bien être motivée par des considérations d'efficacité et non être un comportement anticoncurrentiel. Finalement, il est évident que la législation relative à la concurrence et la législation antitrust devraient s'appliquer aux transferts de créneaux comme au reste. L'analyse selon la règle de la raison devrait s'appliquer pleinement aux transferts de créneaux à condition que l'analyse soit dynamique et tienne compte des aéroports voisins, qu'elle prenne en considération les conditions réalistes du marché et qu'elle soit liée à une soignée analyse du marché.

Le représentant du BIAC propose ensuite plusieurs améliorations qui pourraient être apportées au cadre concurrentiel : premièrement, dans les aéroports manquant de créneaux, les créneaux sont attribués par catégorie de vols -- un certain nombre de créneaux sont réservés aux appareils privés, aux navettes régionales et aux liaisons aériennes internationales et nationales. Ce système de catégories fausse

sans doute le marché. S'il était supprimé, le marché secondaire fonctionnerait mieux. On a tenté de le faire en 1992, mais sans succès. Deuxièmement, il serait souhaitable de renforcer les règles de péremption des droits inutilisés afin d'éviter le problème de rétention. La norme est actuellement fixée à 80 pour cent aux Etats-Unis. Elle pourrait être plus élevée si la rétention pose un problème sérieux. Enfin, les redevances d'aéroport pourraient être ajustées afin d'encourager l'application de tarifs plus élevés pour l'accès aux créneaux en périodes de pointe.

La déléguée des Etats-Unis passe à la question des adjudications. Les transporteurs investissent des sommes énormes dans leurs créneaux. Chaque créneau fait partie d'un système entier de réseaux destiné à alimenter d'autres vols de manière efficiente. Les compagnies aériennes investissent aussi dans les portes et les services au sol. Par ailleurs, la mise en exploitation d'une nouvelle ligne nécessite des investissements lourds. S'il est vrai qu'une partie de ces investissements pourrait être récupérée si une compagnie était obligée d'abandonner ses créneaux, une grande partie serait perdue. De ce fait, les compagnies aériennes trouveraient très menaçante la perspective de perdre des créneaux tous les deux ou cinq ans. Une règle de péremption des droits non utilisés donnerait-elle de meilleurs résultats ? Les transporteurs changent effectivement de stratégie commerciale de temps à autre. Quelques-uns font faillite, si bien que les aéroports récupèrent effectivement des créneaux abandonnés par les compagnies aériennes. Ces créneaux rendus pourraient être vendus aux enchères. Une autre solution serait-elle de limiter le nombre de créneaux qu'une compagnie peut détenir ?

Le Président souligne que la question de la limitation de la durée des créneaux est très importante. Dans le passé, il était contre les droits de durée limitée dans les attributions de spectre parce que les incitations à investir risquaient de disparaître à l'approche de la fin de la période.

Le délégué de la CE fait observer que personne ne prétend que les créneaux ne devraient durer que deux ou cinq ans. Cela conduirait à un effondrement total du système international. En revanche, il n'y a pas de raison d'avoir peur de limiter la durée des droits à créneau. Dans de nombreux secteurs, il est nécessaire en même temps d'investir massivement et de limiter la durée du droit d'opération dans ce secteur. Les franchises dans le secteur des chemins de fer en sont un exemple. Dans les aéroports des Etats-Unis, les portes sont souvent louées pour une période de temps déterminée. Ces portes sont réattribuées au bout d'un certain temps, conformément à l'accord passé préalablement avec l'aéroport. Il existe aussi des locations de créneaux dans des aéroports qui en manquent. Il n'y a aucune raison d'interdire la location de créneaux horaires, mais les conditions de ces arrangements limitent le temps que les opérateurs ont pour récupérer leur investissement sur ces lignes.

En ce qui concerne un système dans lequel les transporteurs aériens achètent des créneaux pour une durée limitée, de huit ans par exemple, le Délégué de la Suède, qui appartient à l'Administration de l'aviation civile, pose la question de savoir si ce système est gérable. A la différence des fréquences radio, qui sont fixes, les compagnies aériennes doivent pouvoir ajuster leurs horaires dans certains aéroports, pour de multiples raisons telles qu'une modification du temps de vol vers d'autres aéroports, un changement de destination, un changement de l'aéroport desservi dans une ville ou une modifications des horaires d'arrivée ou de départ pour des correspondances importantes. Ainsi, un horaire de décollage devra sans doute être modifié plusieurs fois au cours de la période de huit ans, soit par suite de simples changements dans la programmation des vols par la coordonnateur, soit par suite d'échanges de créneaux. Le créneau de départ demandé initialement (qui peut appartenir à un autre transporteur) doit-il être restitué à la fin de la période ou l'horaire de départ effectif découlant du créneau requis initialement doit-il être rendu ? Comment assurer la flexibilité nécessaire sans nuire à la transparence ?

Selon le délégué italien, en ce qui concerne l'analyse de la concurrence pour les créneaux, le marché pertinent à prendre en considération n'est pas le marché des créneaux lui-même mais le marché

des paires de villes entre lesquelles les créneaux sont utilisés. Une forte concentration de créneaux dans un aéroport ne signifie pas forcément que la compagnie aérienne a un pouvoir de marché sur des paires de villes. En ce qui concerne les adjudications, il existe un problème potentiel, à savoir qu'il y a des externalités liées à une forte demande de créneaux, en raison de l'interdépendance des transporteurs. (La valeur d'un créneau pour une compagnie dépend à la fois des autres créneaux qu'elle a déjà et des créneaux que possèdent ses concurrents). On voit difficilement comment ces interdépendances seraient traitées dans une adjudication. Il peut y avoir des analogies ici avec les adjudications de fréquences radio, que l'on pourrait exploiter. Enfin, il ne faut pas oublier qu'une autre possibilité de réaffectation des créneaux serait à l'occasion de rachats de compagnies aériennes.

Le Secrétariat soulève la question de limitation de la durée des droits à créneau, notant, pour commencer, que les discussions portent principalement sur une durée d'une dizaine d'années (et non deux ans comme on l'a laissé entendre auparavant). La question que le Secrétariat soulève a trait au problème de la fin de période -- à savoir le fait que les compagnies aériennes ne sont guère incitées à investir sur une ligne particulière lorsque la fin de la période approche. Une des solutions proposées (dans les ouvrages sur la théorie des jeux) consiste à rendre aléatoire la fin de la période. L'accord concernant le créneau préciserait que la compagnie aérienne a droit au créneau pour, mettons, une durée comprise entre 8 ans et 12 ans, la moyenne étant de 10 ans. Etant donné que, chaque année comprise entre la 8ème et la 11ème, la compagnie n'a pas la certitude de perdre le créneau, elle reste incitée à investir sur ce créneau. Cette incitation sera cependant moins forte, évidemment, qu'elle ne serait si le droit au créneau n'était pas limité dans le temps. Toutefois, s'il n'y a pas de transparence dans le processus aléatoire, il peut se poser un problème de crédibilité car une compagnie, en cas de mauvais résultat, pourrait se plaindre de favoritisme de la part d'une autre compagnie.

La déléguée des Etats-Unis fait savoir qu'elle a parlé avec certains économistes du Ministère de la justice qui étaient optimistes quant à la possibilité d'organiser des adjudications périodiques et à l'effet de la durée des droits sur les décisions d'investissement. Selon eux, les investissements en services tels que les services d'escale et la manutention des bagages, surtout dans les aéroports encombrés, sont très faciles à transférer. Il n'y a aucune raison de penser qu'une limitation de la durée d'un créneau limiterait l'investissement dans ces services. La seule forme d'investissement qui pose problème est le coût de démarrage qu'une nouvelle compagnie aérienne supporte lorsqu'elle tente d'entrer sur une nouvelle ligne. Elle peut enregistrer jusqu'à trois années de pertes avant que la nouvelle ligne devienne rentable. De ce fait, une durée de deux ou cinq ans pour un créneau est probablement trop courte. Dix ans conviendraient probablement.

Le représentant du BIAC relève l'argument selon lequel, lorsqu'on prend en considération les questions antitrust, le marché pertinent n'est pas le marché du créneau lui-même mais le marché des paires de villes dans lesquelles ce créneau peut être utilisé. Il note que, même si cela crée des difficultés pour les autorités chargées de la concurrence, ces difficultés ne sont pas insurmontables du fait que, en principe du moins, les responsables de la concurrence sont en mesure de déterminer le résultat probable, pour une paire de villes, d'un transfert de créneau particulier, de même que celui qui le transfère est en mesure d'en déterminer l'utilisation probable du créneau.

S'agissant de l'attribution des créneaux horaires sur la base des droits acquis, le représentant du BIAC fait observer que les compagnies aériennes en place ont déjà investi lourdement sur leurs lignes, dans les services de portes, dans le transfert de bagages, dans la mise en place d'un réseau viable, dans les promotions et d'autres dépenses qui sont nécessaires pour établir une position. L'incitation à réaliser ces investissements disparaîtrait si ces compagnies n'avaient pas de droits acquis dans le système de créneaux. Les données fournies par le ministère de la Justice des Etats-Unis lors de la visite du représentant du

BIAC laissaient penser que l'utilisation des droits acquis dans l'attribution initiale n'empêcherait pas une affectation efficiente des créneaux en aval et, en fait, éviterait la disparition de l'incitation.

Selon le représentant du BIAC, un système de durée aléatoire des créneaux ne serait pas efficient. Il se pourrait que le détenteur du créneau investisse comme si la durée du créneau était de huit ans seulement, ce qui éliminerait les gains d'efficience liés au système de durée aléatoire. L'organisation d'une adjudication et le fait d'y participer entraînent des coûts de transaction importants. Les adjudications sont des procédures lourdes et coûteuses. Dans l'ensemble, les entreprises américaines paraissent sceptiques à l'égard de la limitation de la durée des créneaux.

Le Président souligne que l'investissement n'est pas un fait ponctuel. C'est un processus continu, qui se déroule tout au long de la vie d'une entreprise. Il est donc très difficile de déterminer quelle est la "juste" durée d'un créneau.

La Suède estime que des créneaux de durée illimitée posent des problèmes pratiques. Si, par exemple, pour des raisons liées à l'environnement, on souhaite fermer un aéroport dans 10 ou 20 ans, l'existence de créneaux de durée illimitée complique les choses. Par ailleurs, il se pourrait qu'une nouvelle technologie apparaisse, qui permette une utilisation plus efficiente des créneaux, ce à quoi les compagnies en place pourraient s'opposer si les créneaux avaient une durée illimitée. Ces considérations pratiques laissent penser qu'il vaut mieux accorder les créneaux pour une durée limitée.

La Suède, suite à la proposition du délégué italien, note qu'il existe, en fait, d'importantes analogies entre les problèmes que posent les adjudications de créneaux d'atterrissage et les attributions de fréquences radio. En particulier, dans les deux cas, la valeur d'un créneau ou d'une partie du spectre dépend des autres créneaux ou des autres parties du spectre que le soumissionnaire compte gagner lors de l'adjudication.

En ce qui concerne les incitations à investir vers la fin de la période du créneau, le délégué suédois établit une analogie avec le marché de la propriété commerciale. Dans ce contexte, il ne semble pas raisonnable d'avoir une durée aléatoire du contrat car on ne sait pas si l'on va être évincé d'une année sur l'autre. Il note aussi qu'un des aspects séduisants de l'adjudication des créneaux horaires est que cette procédure réduit l'asymétrie entre les compagnies en place et les nouvelles qui apparaît lorsque les compagnies en place peuvent obtenir des créneaux gratuitement.

Pour le Président, il existe, certes, d'importantes analogies entre le marché des créneaux horaires et le marché de la propriété commerciale, mais il y a aussi des différences. Le marché de la propriété commerciale est beaucoup plus vaste que le marché des créneaux. Une entreprise a généralement un grand nombre de sites de remplacement à envisager si le loyer augmente ou si le bail est résilié. Une compagnie aérienne n'a pas ces solutions de rechange.

Le Président fait remarquer aussi que pour fournir un service de transport aérien, il faut au moins deux créneaux horaires -- un pour le décollage et un pour l'atterrissage. De ce point de vue, il est évident que les créneaux ont peu de valeur en eux-mêmes mais que c'est lorsqu'ils sont jumelés avec d'autres créneaux qu'ils prennent de la valeur. Cela affecte-t-il sérieusement le fonctionnement du marché ?

Le Délégué des Etats-Unis établit une distinction entre les adjudications de créneaux sur le marché primaire et sur le marché secondaire. Il préfère une adjudication sur le marché primaire, de façon qu'aucune compagnie aérienne ne bénéficie d'un avantage spécial et que le produit revienne au Trésor. Le fait qu'il n'y a pas eu d'adjudication au départ (en 1967 aux Etats-Unis) ne réduit pas l'efficience du marché secondaire. Il demande instamment aux pays de l'UE qui attribuent des créneaux pour la première

fois de réfléchir à la possibilité d'organiser des adjudications. Il souligne aussi les observations de la Suède et de l'Italie selon lesquelles, pour être utiles, les créneaux doivent peut-être être jumelés pour former des paires de villes. A cet égard, la situation est plus facile aux Etats-Unis, où il n'y a que quatre aéroports qui manquent de créneaux. De ce fait, il n'y a généralement de contrainte qu'à une des extrémités d'une paire de villes donnée.

Le problème de l'attribution des créneaux

Le délégué japonais indique qu'au Japon, les créneaux ont une durée de cinq ans. Bien qu'il y ait rarement des créneaux disponibles dans un grand aéroport japonais, un aéroport s'est récemment agrandi et a offert 80 nouveaux créneaux. Ces derniers ont été attribués à la discrétion du ministère des Transports, suivant un système qui est un compromis entre une distribution mécanique égale entre les trois principales compagnies aériennes et une distribution inversement proportionnelle à la part de marché détenue. Les trois principales compagnies, ANA, JAL et JAS, ont des parts sur le marché du transport de passagers d'environ 50 pour cent, 25 pour cent et 20 pour cent respectivement. Un système de répartition inversement proportionnelle attribuerait 18 pour cent des créneaux à ANA, 36 pour cent à JAL et 45 pour cent à JAS. Une distribution mécanique égale des 68 créneaux disponibles en donnerait 23 à chaque compagnie. Si l'on fait la moyenne de ces deux chiffres, ANA reçoit 18 créneaux (26 pour cent), JAL 24 créneaux (35 pour cent) et JAS 26 créneaux (38 pour cent), ce qui a été le cas finalement.

Le délégué français répond que la dernière fois qu'il a vu un tel système d'attribution, c'était lors de l'étude de l'International Electric Association dans les années 50, un cartel de producteurs d'équipements électriques lourds. Les commandes pour ce type d'équipements électriques étaient irrégulières et rares de sorte que les membres du cartel avaient besoin d'un mécanisme pour répartir les commandes entre eux. C'est exactement le système qu'ils ont choisi. Si l'on répète cette opération tous les cinq ans, n'est-il pas vrai qu'à long terme toutes les compagnies aériennes ne finiront-elles pas par avoir exactement le même nombre de créneaux ? Cela ne favorise-t-il pas la création d'un cartel ?

Le Japon répond que cette règle ne sera pas forcément utilisée dans l'avenir -- elle s'applique seulement aux 80 nouveaux créneaux qui ont été ouverts. Si d'autres créneaux sont créés dans d'autres aéroports, la nouvelle règle ne s'appliquera pas nécessairement. Elle n'a pas été utilisée, par exemple, dans le cas des créneaux ouverts à l'aéroport de Kansai il y a quelques années, encore que le cas soit différent car l'aéroport de Kansai est un aéroport international et l'autre est un aéroport national. La durée des créneaux comme le système de distribution pourraient changer dans l'avenir.

Le Japon fait observer par ailleurs que le ministère des Transports a décidé d'attribuer 12 créneaux à de nouvelles entreprises émergentes, c'est-à-dire des entreprises qui n'existaient pas au moment où l'on a su que de nouveaux créneaux seraient disponibles. Bien que plusieurs groupes se soient déclarés intéressés, aucun n'est encore constitué en société. Dans l'intervalle, ces 12 créneaux ont été distribués à parts égales entre les trois compagnies aériennes en place.

La Corée indique que, selon la définition coréenne, elle n'a qu'un aéroport souffrant d'une pénurie de créneaux, à Séoul. Actuellement, il n'existe pas de marché officiel pour les créneaux. Les créneaux peuvent être loués par les compagnies aériennes et de nouveaux créneaux sont attribués suivant le principe "premier arrivé, premier servi". Des échanges sont toutefois possibles. Si une compagnie ne peut pas obtenir les créneaux dont elle a besoin, elle peut demander au responsable de l'attribution la liste des créneaux et tenter de procéder à des échanges directement avec les compagnies en question. Un nouvel aéroport est en construction ; il sera achevé vers 2000, ce qui atténuera le problème de l'encombrement.

Encombrement des aéroports et valeur des créneaux

Arrivé à ce stade des discussions, le Président pose une nouvelle question, celle de savoir comment définir l'“encombrement” et la “pénurie de créneaux”. Il y a une centaine d'aéroports encombrés dans le monde. Cependant, le nombre de créneaux que chaque aéroport peut offrir varie grandement d'un aéroport à l'autre. L'UE a choisi de laisser les Etats membres définir quels sont les aéroports encombrés. Cela rend possibles des comportements stratégiques ou opportunistes de la part des autorités aéroportuaires qui veulent protéger les compagnies dominantes nationales -- par exemple, le fait de considérer un aéroport comme étant encombré peut limiter la possibilité, pour de nouvelles compagnies, d'obtenir des droits d'atterrissage.

Le délégué de la CE indique que le Règlement 95/1993 de la CE définit ce qu'on appelle les aéroports “coordonnés” et “entièrement coordonnés” (qui correspondent plus ou moins aux aéroports encombrés), mais qu'il appartient aux différents Etats membres de désigner ceux qui sont coordonnés ou entièrement coordonnés. Il est possible que des Etats membres soient incités à favoriser leurs propres compagnies sous pavillon national, aux dépens d'autres objectifs que les Etats sont tenus de respecter, tels que l'intégration communautaire etc. Il faudrait peut-être introduire une plus grande transparence, obliger les Etats à préciser pourquoi ils ont choisi ou non de qualifier un aéroport d'encombré. Par ailleurs, il convient de noter que, conformément aux règles de l'IATA, cet organisme peut désigner un aéroport comme étant encombré même si les différents Etats membres ne le souhaitent pas.

Le Délégué italien demande pourquoi on en fait une question de politique gouvernementale. On examine cette question, déclare-t-il, comme si les pouvoirs publics fixaient les modalités et conditions d'attribution des créneaux et procédaient à des adjudications etc. Ne vaudrait-il pas mieux laisser cette question aux aéroports ? Ne seraient-ils pas alors incités à affecter les créneaux de manière efficiente et à prendre des décisions efficaces au sujet de l'expansion des capacités etc. (à condition, bien entendu, que l'on puisse contrôler d'une certaine manière leur pouvoir de marché). Le problème que posent les procédures administratives d'attribution des créneaux horaires (comme c'est le cas au Japon) tient au fait qu'il n'y a aucune garantie d'efficience de l'affectation.

Le délégué soulève une autre question. On suppose que si l'on crée un marché pour les créneaux, les compagnies aériennes qui utilisent les créneaux de la façon la plus efficiente seront celles qui seront disposées à payer le plus et qui obtiendront les créneaux. Cela est souhaitable car on suppose qu'il existe une corrélation entre la disposition à payer et l'excédent social total produit par l'utilisation des créneaux. Cette supposition est juste si les créneaux sont utilisés sur les mêmes marchés de paires de villes. S'ils peuvent être utilisés sur des marchés très divers, cette supposition n'est pas forcément correcte car ces marchés se caractériseront par des conditions de demande différentes ou par l'utilisation de technologies différentes par les compagnies aériennes etc. Cela réduit quelque peu l'efficience du mécanisme de marché pour l'attribution des créneaux. C'est ce qu'affirme un article de Borenstein¹.

On peut illustrer cela à l'aide d'un exemple : si un créneau peut être utilisé sur deux marchés de paires de villes dont l'un intéresse principalement les hommes d'affaires et l'autre intéresse principalement les touristes, il se pourrait que la paire de villes intéressant les hommes d'affaires soit plus rentable que le créneau qui intéresse les touristes, de sorte que la compagnie qui organise des vols sur cette ligne gagnerait le créneau lors de l'adjudication. Cependant, il serait possible que l'excédent total du marché des loisirs soit plus important (par exemple, il peut y avoir davantage de passagers au total). Le

1 Borenstein, Severin, “On the Efficiency of Competitive Markets for Operating Licences”, *Quarterly Journal of Economics*, vol. 103, mai 1988, pp. 357-385.

problème est que, en situation de concurrence restreinte, il n'existe pas forcément de corrélation entre la rentabilité d'une entreprise considérée isolément et l'excédent total.

Le représentant de la CE indique que, dans la pratique, les services internationaux (en raison notamment de la limitation de la concurrence sur les lignes internationales) sont souvent plus rentables que les lignes intérieures. Cela signifie-t-il que sur un marché des créneaux seules les compagnies internationales obtiendront des créneaux tandis que les compagnies régionales n'arriveront pas à survivre ?

Le délégué des Etats-Unis répond que cette question a été résolue en partie grâce au mécanisme d'attribution d'un certain nombre de créneaux à chaque catégorie d'exploitant -- les grandes compagnies aériennes, les services de navette et les avions privés, l'idée étant que les compagnies assurant les navettes desserviront les régions où il y a moins de passagers et une demande réduite. C'est ce qui a été fait, en partie, dans le cas de services universels, qui ne posent peut-être pas un aussi grand problème dans l'UE du fait de l'existence de moyens de transport de substitution tels que le TGV.

Redevances de décollage et d'atterrissage, marché des créneaux et efficience de l'attribution des créneaux : résumé

Le délégué norvégien décrit la situation en Norvège. Dans ce pays, un seul aéroport est encombré -- celui d'Oslo. Le système d'attribution des créneaux en Norvège ressemble à ceux des autres pays européens puisqu'il est fondé sur les réglementations européennes. Les créneaux sont attribués par un responsable, de façon discrétionnaire. Il donne priorité aux compagnies aériennes qui assurent des vols réguliers par rapport à celles qui offrent des vols charters, et aux longs courriers par rapport aux vols plus courts, etc. L'autorité norvégienne chargée de la concurrence préférerait un mécanisme s'appuyant sur les prix pour répartir l'accès à l'aéroport. Il y a trois moyens possibles de faire jouer les signaux de prix, dont deux sont fondés sur la création d'un marché officiel des créneaux : premièrement, création d'un marché secondaire des créneaux ; deuxièmement adjudication de créneaux ; troisièmement, création de redevances d'aéroport.

S'agissant de la création d'un marché secondaire des créneaux horaires, pour intéressante que soit la proposition, il est à craindre que le marché ne soit pas suffisamment liquide parce que la compagnie aérienne dominante s'accrochera à ses créneaux au lieu de les échanger. Un système d'adjudication paraît une solution plus prometteuse. Il est possible, toutefois, que l'organisation d'adjudications régulières impose une lourde charge aux responsables de la réglementation et que cela coûte cher. C'est pourquoi l'autorité norvégienne chargée de la concurrence est plutôt favorable à des redevances d'aéroport pour limiter l'encombrement. Un des problèmes que pose le système de redevances d'aéroport est qu'il est difficile de déterminer la forme de la courbe de la demande, et donc très difficile de fixer le juste tarif. En revanche, cela évite les problèmes de monopolisation potentielle des marchés stratégiques par les compagnies aériennes dominantes. Quel est le problème que pose l'utilisation de redevances d'aéroport comme moyen de limiter l'encombrement ?

Le délégué du Royaume-Uni estime que les redevances d'atterrissage pourraient aider à attribuer des créneaux horaires aux compagnies plus efficaces, mais il doute qu'elles puissent inciter les aéroports à accroître leur capacité et ce, pour un certain nombre de raisons :

En premier lieu, il faudrait que les redevances d'atterrissage soient très élevées pour encourager les compagnies aériennes à quitter Heathrow pour utiliser d'autres aéroports londoniens. Ce n'est pas

simplement une question de préférence des utilisateurs. C'est aussi le fait que sur le plus grand aéroport d'une ville, il y a d'énormes avantages.

La deuxième raison est que, dès que l'on crée des redevances d'atterrissage, on crée un problème de monopole. Un aéroport encombré peut être (mais n'est pas forcément) un monopole. Les monopoles tendent à réduire la capacité au lieu de l'augmenter. Si l'aéroport pouvait opérer une discrimination par les prix, par exemple, en appliquant des tarifs différents aux différentes compagnies aériennes, cela pourrait peut-être encourager une plus grande utilisation de l'aéroport mais, en général, l'aéroport ne veut pas accroître sa capacité et il renonce aux redevances d'atterrissage.

Enfin, la structure de la propriété des aéroports est un aspect important. A Londres, il y a un problème structurel en ce sens que tous les aéroports londoniens appartiennent à la même société. Par conséquent, si les redevances d'atterrissage augmentent à Heathrow, par exemple, en raison de la pénurie de créneaux dans cet aéroport, le propriétaire de l'aéroport n'est guère incité à accroître la capacité à Heathrow car il sait que les compagnies aériennes ne feront que se déplacer vers les autres aéroports qu'il contrôle lui-même et où il a des capacités excédentaires. (On notera, toutefois, que cela reviendrait à une utilisation plus efficace des ressources).

Le délégué des Etats-Unis pose alors la question de savoir si les aéroports sont suffisamment informés pour moduler les prix de manière efficace en fonction des périodes. Pour moduler efficacement les redevances de décollage et d'atterrissage suivant les périodes de pointe ou de creux, il faut obtenir et traiter un volume important d'informations. Le délégué des Etats-Unis pense que les aéroports n'y arriveraient généralement pas. C'est pourquoi on en revient à la possibilité d'un marché des créneaux comme moyen efficace d'attribuer des droits de décollage et d'atterrissage aux périodes de pointe.

Le délégué américain partage l'avis du délégué du Royaume-Uni selon lequel la possibilité de transférer la demande d'un aéroport à un autre est limitée (du moins dans le court terme) lorsque les compagnies aériennes exploitent des réseaux en étoile. Il faudra modifier notablement les prix pour décider une compagnie à choisir un autre aéroport pivot.

Le délégué italien fait deux observations au sujet des redevances : Premièrement, il y a une autre raison pour laquelle les redevances ne sont pas toujours très efficaces. En effet, lorsque les créneaux sont créés par l'aéroport et mis sur le marché par l'exploitant de l'aéroport, le risque de son investissement est supporté par l'acquéreur des créneaux. En revanche, lorsque le seul moyen pour un exploitant d'aéroport de récupérer la valeur de l'investissement est de faire payer des redevances, c'est l'aéroport qui supporte une partie du risque, car le rendement économique de l'investissement n'est récupéré qu'au moment de l'utilisation de l'infrastructure. Deuxièmement, s'il est vrai qu'il faut des redevances d'aéroport très élevées pour inciter à des transferts entre aéroports, quels seraient les effets concurrentiels de ces tarifs élevés sur les petites compagnies qui entrent ? Ces redevances toucheraient-elles davantage les nouveaux entrants que les compagnies en place ?

Attribution des créneaux sur le marché et coordonnateurs des créneaux : le cadre institutionnel

Le Président oriente maintenant le débat vers la question du cadre institutionnel du coordonnateur. Qui ou qu'est-ce qui décide, et sur quelles bases, de la façon dont les créneaux doivent être répartis ? Dans de nombreux pays, le coordonnateur est en fait un agent de la compagnie aérienne dominante, comme c'est le cas en Norvège et en Pologne. En Suède, le coordonnateur était auparavant un agent de SAS, mais maintenant la coordination est assurée par une association des compagnies aériennes suédoises. Jusqu'à ces dernières années, c'était un agent d'Alitalia qui était le coordonnateur en Italie.

Cependant, après des plaintes pour abus de position dominante dans l'attribution des créneaux et une enquête de l'autorité italienne chargée de la concurrence, Alitalia a confié cette tâche au ministère des Transports.

Le délégué de la CE souligne que, pour sûr, les responsables de l'attribution des créneaux peuvent suivre, et suivent effectivement, la trace des créneaux. Ils gèrent des bases de données qui indiquent à tout moment quelles compagnies détiennent des droits sur quels créneaux. Si deux transporteurs conviennent d'échanger leurs créneaux, il en informent simplement le coordonnateur, qui met à jour la base de données. Cela ne pose aucun problème.

Le délégué pose ensuite une question au sujet de l'interaction entre les attributions de créneaux et les accords bilatéraux de services aériens. Ces accords sont négociés par les gouvernements, qui peuvent tenir compte ou non des contraintes d'accès à un aéroport donné. Faut-il attribuer les créneaux en fonction des résultats de ces négociations bilatérales ?

Le Président souligne que, d'après la contribution du Royaume-Uni, le coordonnateur doit être indépendant. On est généralement favorable à l'indépendance, mais dans ce contexte, on ne sait pas exactement ce que le terme "indépendance" signifie. Est-ce l'indépendance par rapport aux compagnies aériennes, par rapport aux aéroports ou par rapport aux deux à la fois ? On ne voit pas bien pourquoi les aéroports, s'ils n'ont pas un intérêt dans les compagnies aériennes, ne pourraient pas assumer la fonction de coordonnateurs.

Le délégué polonais note qu'il est vrai que le coordonnateur des créneaux en Pologne est un agent de la compagnie aérienne dominante. Il est nommé par le ministre des Transports. La personne désignée doit suivre les principes directeurs établis, à savoir travailler d'une manière impartiale, objective et non discriminatoire et être parfaitement neutre à l'égard de toutes les compagnies aériennes.

Le Président précise qu'il ne veut pas donner à entendre que la loi oblige le coordonnateur à avoir un comportement opportuniste. Mais celui qui est salarié d'une entreprise est conscient du fait qu'il a d'importantes possibilités de carrière pour l'avenir dans cette entreprise, et s'il accorde des avantages à cette entreprise, il peut compter être récompensé. Aucune règle ne l'exige (ni même ne l'autorise) mais il est humain de favoriser les vieilles connaissances et relations dans la compagnie aérienne dominante.

En Norvège aussi, c'est un agent de la compagnie dominante qui est le coordonnateur national des créneaux horaires. Cependant, les créneaux doivent être approuvés par l'Administration de l'aviation civile, dont il peut être fait appel des décisions auprès du ministre des Transports et des Communications. Il existe des réglementations qui régissent la supervision des décisions du coordonnateur. Il existe en outre une "commission de coordination", composée de représentant des principales compagnies aériennes assurant des vols au départ de l'aéroport d'Oslo, qui a un rôle consultatif. Evidemment, les compagnies aériennes en place ne se plaignent pas de ce système.

Le délégué de la Suisse se présente comme un représentant du régulateur national. En Suisse également, c'est la compagnie dominante, SwissAir, qui assure la coordination de l'attribution des créneaux horaires, en collaboration avec les aéroports. Il fait observer que le groupe de travail a dû se réunir à Singapour, où se déroule la conférence de l'IATA sur l'attribution des créneaux horaires. Il est très intéressant de suivre les travaux de cette conférence, à laquelle participent plus de 800 délégués d'environ 150-200 compagnies aériennes. En Europe (hors de l'UE), il n'y a pas encore d'ouverture de l'espace aérien. Les droits de circulation aérienne sont accordés sur la base d'accords de services aériens. La principale préoccupation du délégué suisse, en tant que régulateur, est de faire en sorte que tout nouveau système d'attribution des créneaux n'interfère pas avec le système actuel de droits de circulation

octroyés par les gouvernements ou autorités aéronautiques respectifs. Il n'y aurait évidemment guère de sens à accorder des droits de circulation à un pays étranger ou à une compagnie aérienne étrangère si cette compagnie n'arrive pas obtenir de créneaux dans les aéroports qu'elle veut desservir. C'est pourquoi les créneaux doivent être attribués par l'autorité qui octroie les droits de circulation.

Le Président demande pourquoi ce ne serait pas l'inverse : si ce sont les créneaux qui sont la ressource rare (et non les droits de circulation), n'est-il pas préférable que les compagnies obtiennent d'abord des créneaux puis qu'elles s'adressent aux gouvernements pour obtenir des droits de circulation ?

La Suisse répond qu'en fait les compagnies aériennes ne s'assurent pas qu'elles disposent de créneaux particuliers avant de solliciter des droits de circulation.

Le délégué de la Suède, membre de l'Administration de l'aviation civile, revient à la question de l'indépendance du coordonnateur des créneaux. Auparavant, en Suède, la compagnie aérienne nationale SAS assurait la coordination des créneaux. Cela résultait du système traditionnel dans lequel les accords de services aériens se négociaient au plan bilatéral. Toutefois, le transporteur national utilisait son propre système informatisé de réservation pour assurer la coordination des créneaux. De ce fait, toutes les informations sur les créneaux étaient disponibles à l'entreprise dont les salariés avaient accès aux demandes des concurrents. Lorsqu'un organisme indépendant a été créé, un système informatique distinct a été installé, auquel toutes les compagnies aériennes et toutes les autorités aéroportuaires ont été reliées dans des conditions égales et non discriminatoires.

Le délégué italien rappelle l'expérience de l'Italie. Comme le Président l'a dit, en Italie c'était auparavant la compagnie sous pavillon national qui assurait la coordination des créneaux, mais ce n'est plus le cas aujourd'hui, grâce à une intervention de l'autorité antitrust. En fait, la compagnie aérienne a renoncé à son rôle de coordonnateur avant même de connaître le résultat de l'enquête. En effet, avec l'intensification de la pression concurrentielle, il était de plus en plus embarrassant pour la compagnie sous pavillon national d'assumer cette fonction. Actuellement, la coordination des créneaux est assurée par le ministère, qui est censé créer un nouvel organisme coordonnateur.

On a parlé d'indépendance, mais qu'est-ce que cela veut dire dans la pratique ? On peut identifier deux aspects : l'un est le financement, et l'autre est la structure administrative de l'organisme. L'organisme devra probablement avoir un noyau de personnel permanent assurant les fonctions quotidiennes et un corps ou un comité consultatif assistant le coordonnateur. Il existe plusieurs propositions concernant la composition de ce comité consultatif. Pour certains, il doit être composé uniquement de représentants des compagnies aériennes, pour d'autres, il doit être composé de représentants des compagnies aériennes et d'exploitants d'aéroport. Si les compagnies aériennes y sont représentées, tous les entrants potentiels, y compris des compagnies étrangères, doivent pouvoir être membres. Par conséquent, ce comité risque de devenir une réplique de la commission de l'IATA (dont les résultats dépendent de l'unanimité, ce qui n'est pas une garantie d'efficacité). Par ailleurs, ce type de commission offre d'importantes possibilités de collusion et d'accords sous la table. Une autre possibilité serait que seuls les exploitants d'aéroport nomment le coordonnateur et supervisent la fonction de coordination. Cela soulève la question des relations verticales entre les aéroports et les compagnies aériennes dominantes. Malheureusement, dans la plupart des pays d'Europe, ces relations verticales restent très fortes. En principe, toutefois, l'exploitant d'aéroport pourrait être un répartiteur de créneaux raisonnablement neutre. On ne sait pas encore comment l'organisme de coordination des créneaux sera finalement structuré.

Le délégué de la CE note que la procédure internationale d'attribution des créneaux se déroule en trois temps : dans un premier temps, le coordonnateur attribue des créneaux aux compagnies aériennes.

Dans un deuxième temps, les compagnies participent à la conférence de l'IATA afin d'échanger des créneaux avec d'autres compagnies. Enfin, après la conférence de l'IATA, les transporteurs peuvent encore conclure des arrangements entre eux avec l'accord des coordonnateurs responsables.

Pour le délégué de la CE, le véritable problème est celui de la transparence. Avec une transparence suffisante, on peut compter sur les transporteurs qui se sont vu refuser des créneaux pour tenter de redresser la situation. Jusqu'à présent, la transparence dans le processus d'attribution des créneaux n'est pas satisfaisante.

Le délégué autrichien, représentant de l'Autorité chargée de l'aviation civile en Autriche, décrit la situation dans son pays. Il y a un coordonnateur qui est en fait un agent d'Austrian Airlines. Actuellement, l'aéroport de Vienne n'est pas encombré. Pour l'Autriche, le problème de l'attribution des créneaux est un problème propre à un petit nombre d'aéroports européens -- Heathrow à Londres, Francfort, Bruxelles, Paris et Milan. Bien que l'Autriche s'intéresse au cas de ces aéroports et aux solutions adoptées, la compagnie sous pavillon autrichien souhaiterait pour le moment que la situation actuelle reste inchangée.

Il importe d'ajouter que si le coordonnateur agit de façon partielle (parce qu'il est un salarié qui agit dans l'intérêt de la compagnie aérienne nationale), il est possible que les coordonnateurs des autres aéroports ripostent. Si les aéroports autrichiens traitent les concurrentes d'Austrian Airlines (telles que Lufthansa ou Malaysian Airways) de façon déloyale, un coordonnateur de Zurich ou de Kuala Lumpur en sera informé et réagira immédiatement. Par ce mécanisme bilatéral "traditionnel" s'établit une sorte d'équilibre.

Le Président précise qu'il ne peut y avoir de riposte que du point de vue de la concurrence étrangère. Une compagnie aérienne nationale qui cherche à obtenir des créneaux n'a pas de coordonnateur pour défendre ses intérêts. S'il est vrai que tant que les grands aéroports ne sont pas encombrés, il n'y a pas de problèmes d'attribution des créneaux, il importe que le cadre institutionnel approprié soit en place de sorte que, lorsqu'un aéroport devient finalement encombré, les décisions du coordonnateurs soient suffisamment transparentes pour éviter tout comportement opportuniste.

Droits de propriété et contrôles antitrust

Le délégué de la CE note qu'en raison de l'énorme volume de données que le coordonnateur traite, du grand nombre d'échanges de créneaux et du manque général de transparence, il est peut-être très difficile pour les autorités chargées de la concurrence de savoir si un échange particulier est anticoncurrentiel ou non.

S'agissant du statut des droits à créneaux dans l'UE, le délégué indique que les droits des compagnies aériennes ne sont pas des droits de propriété, mais simplement des concessions administratives. En fait, d'un point de vue juridique, c'est probablement l'Etat qui est le propriétaire légal et non la compagnie aérienne.

Le délégué allemand fait observer qu'en Allemagne il est en fait difficile de dire à qui appartient réellement un créneau. On craint en Allemagne que le fait de retirer les créneaux aux compagnies aériennes ne constitue une atteinte aux droits de propriété, pour laquelle l'Etat aurait à payer une indemnité. Par ailleurs, si l'on autorise effectivement les compagnies en place, qui ont obtenu leurs créneaux sur la base des droits acquis, à échanger ces créneaux, ne crée-t-on pas une asymétrie entre la situation de ces compagnies et celle des nouveaux entrants qui, eux, doivent payer le prix fort du marché ?

En outre, si le volume de créneaux sur le marché est relativement faible (par rapport au stock total), les nouvelles compagnies qui arrivent sur le marché ne se trouveront-elles pas dans une situation où elles ne pourront pas acquérir les créneaux dont elles ont besoin pour fournir un service viable ? Enfin, il est à craindre que la compagnie dominante en place ne réagisse à l'entrée de concurrentes en modifiant l'horaire d'un vol existant de sorte qu'il parte quelques minutes avant celui de la nouvelle compagnie, et qu'elle n'offre des prix défiant toute concurrence grâce à une péréquation réalisée à partir d'autres lignes. Ce n'est un secret pour personne que la seule concurrente de la Lufthansa en Allemagne, Deutsche Bayer, enregistre des pertes depuis des années.

Le Président répond qu'il faut faire une distinction entre un comportement concurrentiel et un abus. Si l'entreprise dominante est menacée, elle ne doit pas rester passive et subir les conséquences. Dans certains cas, le fait de modifier les horaires des vols afin de les placer à quelques minutes de ceux de la nouvelle compagnie peut être un abus si, par exemple, la nouvelle compagnie, en raison du nombre limité de créneaux, n'a pas la possibilité d'en faire autant. Dans d'autres cas, c'est une réaction concurrentielle normale.

Conclusions

En conclusion de cette partie de la table ronde, le Président souligne que le débat a été intéressant notamment parce qu'il n'y a pas de solution simple aux problèmes abordés.

Un des points qui se dégagent, non comme un point de vue unanime mais comme une vue très importante de la majorité, est que les mécanismes du marché sont un instrument majeur dans l'attribution des créneaux d'aéroport. Il apparaît en outre que la nature précise des droits de propriété dans le domaine des créneaux est un point essentiel. Même si, en théorie, il importe peu de savoir comment les droits de propriété ont été attribués initialement, il est certainement indispensable de définir clairement ces droits.

L'incitation qu'ont les autorités aéroportuaires à accroître la capacité est aussi un élément non négligeable. Il ressort clairement de cette discussion que tous les aéroports encombrés n'ont pas la possibilité d'augmenter leur capacité. Cependant, si les autorités aéroportuaires obtiennent des droits de propriété sur les créneaux, elles seront fortement incitées à accroître les capacités.

Certains aéroports ont un monopole régional. Il convient alors de surveiller de près leur comportement afin de déceler d'éventuels abus de pouvoir de marché. L'Australie a mis en place un système d'incitation pour la réglementation aéroportuaire. Lorsque la concurrence entre les compagnies aériennes est limitée, la réglementation de l'aéroport aura peu d'effet car les bénéfices seront simplement transférés des autorités aéroportuaires aux compagnies aériennes, sans aucun avantage pour les utilisateurs.

L'idéal serait d'avoir un système d'incitations efficace pour que les aéroports accroissent leur capacité, pour que les compagnies efficaces soient choisies comme fournisseurs de services aériens et pour qu'il n'y ait pas d'exploitation du pouvoir de marché.

A cet égard, il faudrait que les autorités chargées de la réglementation veillent à ce que les aéroports n'exploitent "pas trop" le pouvoir de marché qu'ils ont. Cependant, elles ne devraient pas intervenir, comme elles le font actuellement, dans la façon dont les aéroports décident d'exploiter le pouvoir de marché général qu'ils sont autorisés à exercer. Il n'est certainement pas efficace de contrôler strictement les redevances de décollage et d'atterrissage et de laisser les aéroports libres d'exercer leur pouvoir de marché en ce qui concerne toutes les autres opérations commerciales qui s'effectuent dans les

aéroports. Il faudrait limiter les bénéfices globaux qu'un aéroport est autorisé à réaliser, mais à l'intérieur de ces limites générales, l'aéroport devrait être libre de déterminer la redevance qu'il fait payer pour les différents services qu'il fournit.

La concurrence dans les services d'escale

Le Président passe à la deuxième partie de la table ronde, à savoir la concurrence dans les services aéroportuaires d'escale. Il soulève plusieurs questions relatives aux restrictions à l'entrée. Qui décide qui doit entrer et combien de concurrents doit-il y avoir sur les marchés ? Est-ce un problème de réglementation ou un problème de contrôle antitrust ?

Il ressort clairement des documents soumis que, dans de nombreux pays, les compagnies aériennes ont la possibilité de fournir elles-mêmes des d'escale ("auto-handling"). Il importe de reconnaître que l'auto-handling constitue une menace concurrentielle sérieuse pour l'autorité aéroportuaire du fait qu'elle plafonne le prix et fixe un seuil de qualité pour les fournisseurs en place de services d'escale, même s'il existe un monopole local.

Le délégué français fait savoir que la France n'a pas fourni de document écrit pour cette partie de la table ronde car, lorsqu'il s'est agi de décider s'il fallait en fournir un ou non, il a été demandé à l'autorité française chargée de la concurrence de donner un avis sur un projet de loi visant à transposer la Directive 96/67 de la CE (intitulée "Services pour les avions en transit dans les aéroports de la Communauté européenne") dans la législation française. De l'avis de l'autorité responsable de la concurrence, ce projet de loi soulevait deux aspects importants :

- (1) Premièrement, le degré de conformité du projet de loi avec les dispositions de la Directive de la CE, qui développe le principe de "services généralisés". Sur ce point, l'autorité en charge de la concurrence a décidé qu'il était de loin préférable, d'un point de vue économique, d'éviter de gaspiller des ressources rares, comme cela peut arriver dans le cas de l'auto-handling. De fait, si dix grandes compagnies opèrent à l'aéroport et que chacune d'elles opte pour l'auto-handling, il y aura dix camions de ravitaillement, dix camions pour les services de maintenance etc. L'autorité chargée de la concurrence a fait valoir qu'il était préférable qu'il y ait un seul fournisseur de ces services -- soit une tierce partie, soit l'une des compagnies en place. Elle s'est donc déclarée favorable au principe de "services généralisés".
- (2) Deuxièmement, les critères d'accès aux services d'escale. La première version du projet de loi proposait un seul critère -- la densité du trafic -- pour déterminer comment choisir les fournisseurs de services d'escale. L'autorité française chargée de la concurrence a suggéré que le gouvernement adopte un critère différent -- à savoir que le fournisseur qui est disposé à payer le plus obtienne la concession pour la fourniture de services d'escale. Il est trop tôt pour dire si le gouvernement suivra cette proposition. Jusqu'à présent, le projet de loi ne précise pas qui réglemente l'entrée.

La Norvège précise que, dans ses contributions écrites, elle a décrit plusieurs affaires. Le thème commun de ces affaires est la restriction d'accès aux marchés aéroportuaires -- plus précisément, les marchés des services d'escale, les services de location de voitures et les cabines téléphoniques publiques. Ce qui préoccupait l'autorité chargée de la concurrence était que l'on soupçonnait l'Administration de l'aviation civile d'accepter moins d'entreprises qu'il n'était strictement nécessaire en raison des contraintes de capacité. Malheureusement, l'Administration norvégienne de l'aviation civile est à la fois la

propriétaire et la responsable de la réglementation des aéroports. Elle reçoit à la fois les droits de licence et le produit des échanges de créneaux etc. Il est fort possible que, lorsqu'elle décide des questions d'accès à l'aéroport, elle tienne compte principalement des intérêts des entreprises privées plutôt que des questions d'efficacité économique et de concurrence. Le système actuel n'est guère satisfaisant. Les fonctions de l'Administration de l'aviation civile dans le domaine de la réglementation devraient être séparées de ses intérêts en tant que propriétaire. Il y a quelque progrès à cet égard.

Le délégué de la CE formule deux observations au sujet du problème de la concurrence dans les services d'escale : premièrement, s'agissant de l'accès au marché, il existe une Directive de la CE qui régit l'accès au marché des services d'assistance en escale. Les aéroports peuvent avoir des raisons, liées à la capacité ou à l'efficacité, de limiter le nombre de fournisseurs de services d'escale, mais cela doit être démontré d'une certaine manière et examiné par les autorités nationales compétentes. Un problème particulier se pose, toutefois, lorsque l'aéroport a des relations verticales avec l'entreprise qui fournit des services d'escale. Dans ce cas, l'aéroport est fortement incité à augmenter les coûts des nouveaux entrants (et à récupérer leurs bénéfices) au moyen de redevances d'accès. Cette question n'est pas encore résolue par les directives de l'UE.

Le Président note que, quand un aéroport intégré verticalement est obligé, conformément aux normes européennes, d'avoir un certain nombre de concurrents, il essaiera de choisir ceux qui ne sont pas très compétitifs. Lorsque la réglementation oblige les entreprises à s'ouvrir à la concurrence, la concurrence qui est autorisée peut être une fausse concurrence.

De l'avis du délégué italien, la question de savoir si l'aéroport est ou non incité à adopter des pratiques d'exclusion dépend de la nature de la réglementation à laquelle il est assujéti. En Italie, par exemple, les exploitants d'aéroport sont soumis à de lourdes réglementations du côté de l'aéroport (redevances de décollage et d'atterrissage etc.). En revanche, il n'y a guère de réglementation concernant les droits qu'ils peuvent faire payer aux utilisateurs de l'espace aéroportuaire. Dans ces conditions, il n'est pas évident que l'aéroport soit incité à mettre en oeuvre des pratiques d'exclusion.

Il y a eu un certain nombre d'enquêtes antitrust en Italie, aussi bien dans les services d'escale que dans d'autres services tels que la restauration et la sécurité, en particulier aux aéroports de Milan et de Rome. On a constaté en effet un abus de position dominante de la part de l'exploitant de l'aéroport. Ces affaires sont particulièrement intéressantes en ce sens que la raison pour laquelle l'exploitant de l'aéroport tentait d'éviter l'entrée d'autres fournisseurs de services était qu'il y avait eu, dans le passé, un partage de rente entre les syndicats et les aéroports -- les salaires des travailleurs assurant les services d'escale n'avaient aucun rapport avec le marché. L'aéroport cherchait à éviter l'entrée de concurrents afin de maintenir cette "entente" avec les syndicats. Dans ces affaires, l'organisme antitrust italien a recouru à une disposition de la législation qui prévoit explicitement un droit à l'auto-handling. Les économies d'échelle dans la fourniture de services d'escale ne sont pas importantes au point de justifier un système de concurrence pour le marché servi par un seul opérateur. De fait, l'exemple de nombreux aéroports du nord de l'Europe montre qu'il est parfaitement possible d'avoir un grand nombre d'opérateurs différents sur ces marchés sans que cela pose aucun problème pour les aéroports. En réalité, si l'on compare les prix, on constate qu'ils sont beaucoup plus bas dans les aéroports où il y a de la concurrence que dans les autres.

Le délégué italien note aussi un problème avec le regroupement des services en "paquets". Souvent, les exploitants d'aéroport obligent les compagnies aériennes à acheter un "paquet" de services même si elles n'utilisent pas ces services elles-mêmes (peut-être parce qu'elles assurent l'auto-handling). A cet égard, il importe de supprimer ce système si l'on veut assurer le développement de la concurrence sur ces marchés.

Le délégué suisse indique qu'en Suisse il y a, en fait, le choix entre deux fournisseurs de services d'escale. Cependant, les compagnies aériennes n'ont ce choix qu'à condition que, dans leur pays d'origine, la réciprocité soit accordée aux transporteurs suisses. Si une compagnie aérienne étrangère veut avoir le choix entre les deux fournisseurs de services d'escale, il faut que le même choix soit offert aux transporteurs suisses dans les principaux aéroports de son pays d'origine. En ce qui concerne les "enregistrements automatiques" (introduits au début de 1995), seules les compagnies aériennes qui assurent un certain pourcentage du trafic passagers total dans les aéroports suisses sont autorisées à assurer l'auto-handling et les "enregistrements automatiques". A l'aéroport de Zurich, ce seuil a été fixé à 1.5 pour cent du trafic passagers total. A l'aéroport de Genève, le seuil a été fixé à trois pour cent. (Il y a une erreur dans le document soumis par la Suisse, qui donne un chiffre de quatre pour cent). Si le transporteur suisse ou étranger atteint ce seuil, il est autorisé à assurer lui-même les services d'escale pour ses vols ainsi que pour les vols de ses partenaires qui partagent le code (à condition que la réciprocité soit accordée dans le pays d'origine aux transporteurs suisses). Il est à noter que les opérateurs qui atteignent ces seuils sont autorisés seulement à assurer ces services pour eux-mêmes (et pour leurs partenaires qui partagent le code) mais non pour des compagnies tierces.

Conclusions

En conclusion, le Président note que, dans cette partie de la table ronde, les questions de concurrence dans les services d'escale sont apparues assez importantes. Il importe aussi de distinguer entre la personne qui décide quels sont les concurrents qui peuvent entrer et la personne qui fait effectivement concurrence sur le marché. Il est évident que, surtout avec les normes européennes qui exigent qu'il y ait au moins deux opérateurs à chaque aéroport, ces questions continueront d'occuper les autorités chargées de la concurrence.