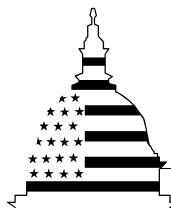


July 2004

TRANSATLANTIC AVIATION

Effects of Easing Restrictions on U.S.-European Markets



GAO

Accountability * Integrity * Reliability

Highlights of [GAO-04-835](#), a report to congressional requesters

Why GAO Did This Study

Transatlantic airline operations between the United States and European Union (EU) nations are currently governed by bilateral agreements that are specific to the United States and each EU country. Since 1992, the United States has signed so-called “Open Skies” agreements with 15 of the 25 EU countries. A “nationality clause” in each agreement allows only those airlines designated by the signatory countries to participate in their transatlantic markets.

In November 2002, the European Court of Justice ruled that existing Open Skies agreements were illegal under EU law, in part because their nationality clauses discriminated against airlines of other EU nations. The United States and the EU have been negotiating revisions to these agreements. Experts agree that removing the nationality clause is central to any new agreement. GAO was asked to report on (1) how prevalent Open Skies agreements are and what their effects on airlines and consumers are, (2) what the key ways that commercial aviation between the United States and the EU could be changed by the Court of Justice decision are, and (3) how the elimination of nationality clause restrictions might affect airlines and consumers. GAO’s work included both analyzing data on transatlantic air service and evaluating information from and positions of industry officials, subject-matter experts, and stakeholder groups. GAO is making no recommendations.

www.gao.gov/cgi-bin/getrpt?GAO-04-835.

To view the full product, including the scope and methodology, click on the link above. For more information, contact JayEtta Z. Hecker, (202) 512-2834, heckerj@gao.gov.

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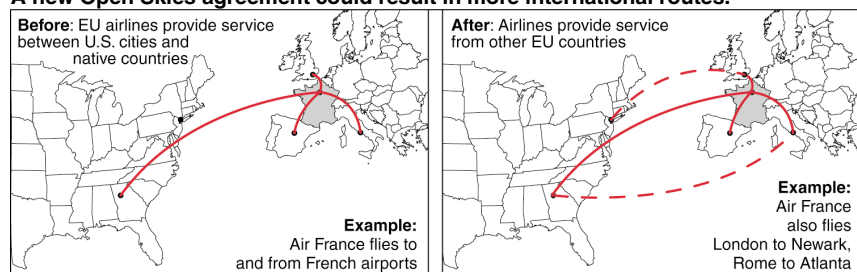
What GAO Found

Open Skies agreements have benefited airlines and consumers. Airlines benefited by being able to create integrated alliances with foreign airlines. Through such alliances, airlines connected their networks with that of their partner’s (e.g., by code-sharing agreements), expanded the number of cities they could serve, and increased passenger traffic. Consumers benefited by being able to reach more destinations with this “on-line” service, and from additional competition and lower prices. GAO’s analysis found that travelers have a choice of competitors in the majority of the combinations of U.S.-EU destinations (such as Kansas City-Berlin).

The Court of Justice decision could alter commercial aviation in four key ways. First, it would essentially create one Open Skies agreement for the United States and EU, thereby extending U.S. airline access to markets that are now restricted under traditional bilateral agreements. Notably, more U.S. airlines would gain legal access to London’s Heathrow airport, which is restricted by the U.S. agreement with the United Kingdom. Second, it would also allow EU airlines to operate into the United States from airports outside their own countries. Third, for EU airlines, a revised agreement could alleviate some obstacles to merging with other EU carriers or creating subsidiary operations in other countries. Finally, the possibility that EU airlines might move some operations into other EU nations raises concerns about which EU nations’ regulatory and legal systems would govern.

U.S. airlines and consumers are likely to benefit from the elimination of the nationality clause, but the benefits may not be realized in the near term. Both U.S. consumers and airlines would benefit from gaining access to markets restricted under bilateral agreements, especially London’s Heathrow airport, though capacity considerations there are likely to postpone and limit such access. Consolidation within the EU aviation industry could occur, with the effect on U.S. consumers varying, depending on whether consolidation creates additional competition or reduces it in particular markets. EU airlines could begin new transatlantic service in countries other than the airline’s own, which would provide consumers with additional competitive choices (see graphic). However, those airlines would likely face difficulties in competing successfully at another airline’s hub.

A new Open Skies agreement could result in more international routes.



Source: GAO.

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Abbreviations

EU	European Union
DOT	Department of Transportation
DOJ	Department of Justice
State	Department of State
UK	United Kingdom
Heathrow	London Heathrow Airport
KLM	KLM Royal Dutch Airlines
DG TREN	European Union Directorate General Transport and Energy
DG COMP	European Union Directorate General for Competition
BACK	BACK Aviation Solutions
FAA	Federal Aviation Administration
AEA	Association of European Airlines
UPS	United Parcel Service

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United States Government Accountability Office
Washington, D.C. 20548

July 21, 2004

The Honorable John McCain
Chairman
The Honorable Ernest F. Hollings
Ranking Minority Member
Committee on Commerce,
Science, and Transportation
United States Senate

The Honorable Trent Lott
Chairman
The Honorable John Rockefeller
Ranking Minority Member
Subcommittee on Aviation,
Committee on Commerce,
Science, and Transportation
United States Senate

Since the late 1970s, commercial aviation within the United States and the nations that form the European Union (EU)¹ has become substantially deregulated, creating greater competition, lower fares, and significant increases in passenger traffic. Commercial aviation between the United States and the EU is not deregulated to the same degree. Since 1992, however, the United States has signed what are called “Open Skies” agreements with a number of EU nations. These bilateral agreements seek to create a more deregulated transatlantic environment between the two nations signing the agreement by reducing or eliminating operating restrictions on the airlines of either nation. This means that any airline licensed by either nation can offer service between the two nations. This same relaxation of restrictions does not extend, however, to airlines licensed by other nations. Under what is called the “nationality clause,” the right to provide nonstop service between a point of origin in one nation and a destination in a second nation is limited to airlines that are owned and

¹The European Union was initially established with 6 countries under the Treaty of Paris (1951) and the Treaty of Rome (1957), which set the ground rules for the European Union. These founding treaties have since been amended by the Single European Act (1986), the Treaty of the European Union (Maastricht 1992), the Treaty of Amsterdam (1997), and the Treaty of Nice (2001). The EU now has 25 member countries. EU countries have reached EU-wide agreement in certain policy areas and operate as a single economic market.

controlled by citizens of the two nations signing the agreement, thereby effectively excluding other EU airlines from providing competing service.²

In November 2002, the European Court of Justice, the EU body responsible for interpreting European law, ruled that seven existing Open Skies agreements and the bilateral agreement between the United States and the United Kingdom violated EU law. In particular, the Court of Justice found that the nationality clause illegally discriminated against airlines from other EU nations because it excluded them from entering the transatlantic aviation market between the two nations that had signed the agreement. In June 2003, the European Council, composed of representatives from each member state, issued a mandate to the European Commission to negotiate with the United States on the creation of an Open Aviation Area, which provides for the liberalization of the U.S.-EU market, including the removal of restrictions on foreign investment in airlines between the EU and the United States.

In October 2003, the United States and the EU opened negotiations. Industry experts and stakeholders we spoke with agreed that resolving the nationality clause was the key issue. However, in June 2004, the European Council rejected a draft agreement being negotiated by the United States and the EU Commission. The European Council stated that further efforts should focus on “more balanced market access provisions” than were included in the draft agreement. U.S. officials interpreted that as referring to a desire by EU carriers to gain more direct access to the U.S. domestic aviation market. Further contacts are being considered. U.S. and EU officials stated that current agreements remain in effect. There is no set time frame for when the matter must be settled.

Changing the agreements to remove the nationality clause restrictions carries implications for U.S. and EU airlines, airline passengers, and other stakeholders within the airline industry. These negotiations thus represent an opportunity to examine the current agreements and their effect on the U.S. airline industry, as well as the implications of potential changes to those agreements. You asked us to report on the potential implications of changes in these agreements. We examined the following questions:

²Under current Open Skies agreements, airlines are allowed to provide service from other “Open Skies” nations into the United States; however, such flights must be continuations of flights that originate in the airline’s home country.

-
- How prevalent are Open Skies agreements between the United States and EU nations, and what has been their effect on airlines and consumers?
 - What are the key ways that commercial aviation between the United States and the EU could be changed by the Court of Justice decision?
 - How might the elimination of nationality clause restrictions in any new U.S.-EU agreement affect airlines and consumers?

To examine the prevalence and effect of Open Skies agreements on airlines and consumers, we reviewed prior research from a variety of organizations, including the U.S. Department of Transportation (DOT), and we analyzed DOT data on passenger traffic from 1990 through 2002. To determine the key issues related to the European Court of Justice's decision, we interviewed officials from five major U.S. and eight major EU airlines; DOT; the U.S. Department of State (State); the European Commission Directorates General for Competition, Employment, and Transport; U.S. and EU labor unions and associations; and EU airports, as well as officials of EU aviation trade associations. To determine how the absence of the nationality clause restrictions might affect airlines and consumers, we interviewed industry experts about the likely outcome of removing the nationality clause restrictions, and used prior research to highlight any potential benefits or barriers that airlines and consumers would face. We also analyzed available data on capacity constraints at EU airports and the effect of opening transatlantic markets on labor. We assessed the reliability of the various data sets analyzed throughout the report and determined that they were sufficiently reliable for our purposes.

We recognize that other important factors must be carefully examined when analyzing international aviation. For example, issues relating to safety and security regulatory oversight are obviously critical to any comprehensive analysis of air transportation. Because of the magnitude of these issues, however, we agreed with your staff at the outset that they were beyond the scope of this report. In addition, while the EU mandate called for the creation of a more open aviation market (including issues such as foreign ownership restrictions and access to domestic markets), both U.S. and EU officials acknowledged that addressing the Court of Justice ruling and resolving the nationality clause issue were both priorities, and we therefore focused our report on the issues linked to the ruling only. We also agreed to exclude from this report several other related issues – such as requirements that U.S. government employees and others

using U.S. government financed foreign air travel to use U.S. airlines.³ For additional information on our objectives, scope, and methodology, see appendix I. We conducted our work from October 2003 through July 2004 in accordance with generally accepted government auditing standards.

Results in Brief

Starting in 1992 with the signing of the first of 15 Open Skies agreements between the United States and EU nations, both consumers and airlines have benefited from the removal of government restrictions on international aviation. With one notable exception, the United States has Open Skies agreements with the EU countries to which most transatlantic passenger traffic flows. The exception is the nation that is the single largest transatlantic market in terms of passengers and flights—the United Kingdom (UK). Under the U.S.-UK agreement, only two U.S. airlines have access to London’s Heathrow airport, the major gateway to the United Kingdom and the largest EU airport for transatlantic passengers. Available research indicates that U.S. airlines profited from Open Skies agreements by establishing more integrated alliances with EU airlines. Consumers benefited from Open Skies agreements because they allowed airlines and alliances to provide on-line service to more locations at cheaper fares. Our analysis of scheduled service for May 2004 showed that the majority of possible U.S.-EU markets were served with no worse than two-stop flights. Moreover, travelers had a choice of competitors, with the majority of markets being served by three or more airlines (or alliances).⁴

Addressing the findings of the Court of Justice decision could change commercial aviation between the United States and the EU in at least four key ways. They are as follows:

- *Extension of U.S. airlines’ Open Skies traffic rights to the entire EU.* If the rights available to both U.S. and EU airlines under the 15 current Open Skies agreements were extended to the entire EU, U.S. airlines would gain equal legal access to and between EU nations that still have restrictive bilateral agreements. However, significant capacity

³The Fly America Act, 49 U.S.C. App. 40118, as implemented in General Services Administration regulation 41C.F.R. section 301-10.131 et seq., requires federal employees and their dependents, consultants, contractors, grantees, and others performing U.S. government financed foreign air travel to travel by U.S. airlines.

⁴In the airline industry, a market has been defined as scheduled airline service between a point of origin and a point of destination.

constraints and restrictions at a number of airports in these nations are likely to limit the airlines' ability to make use of this new access, at least in the near term. Some of those rights may have greater implications for cargo carriers than passenger airlines. (Cargo issues are discussed in greater detail in appendix III.)

- *Extension of traffic rights for EU airlines.* Removal of the nationality clause restrictions would mean that the United States would recognize all EU airlines as “European Community” airlines. With this recognition, all EU airlines would gain the right to operate into the United States from EU airports outside of their home countries. For example, Air France, which currently can operate direct nonstop service only between U.S. and French cities, could legally provide nonstop service to the United States from any city within the EU.⁵ EU airlines from countries with restrictive bilateral agreements, such as Spain, Greece and the United Kingdom, would also gain further access to U.S. markets.
- *Internationalization of airline operations within the EU.* To the extent that nationality-based restrictions would be removed, EU-based airlines would be able to move their operations to other EU member states and still provide service to the United States—for example, by merging with or acquiring another airline, creating a subsidiary, or moving an existing base of operations.
- *Continued regulatory oversight.* The possibility that EU airlines might relocate into other EU nations raises issues about which nation’s legal and regulatory system would apply, particularly regarding safety, security, and labor law. U.S. and EU labor groups have questioned whether EU airlines, in attempting to reduce costs to improve their overall competitiveness, would relocate operations to nations with lower wages or labor standards.

Based on past experience with the U.S. aviation market, the opinion of industry experts, and our analysis of available data, U.S. consumers and airlines are likely to benefit if nationality clause restrictions are eliminated

⁵Under current Open Skies agreements, Air France is allowed to provide service from other “Open Skies” nations into the United States; however, this service must be a continuation of a flight that originates in a French city, flies to a city in another EU nation, and then continues on to a destination in the United States. (The right to conduct such connecting flights are included within the Open Skies agreements.) The same is true for other airlines that are owned and controlled by citizens of Open Skies nations.

between the United States and the EU, but the benefits may not be realized for some years and will depend in part on the business strategies that U.S. and EU airlines choose.

- *U.S. airlines and consumers could gain additional access to London's Heathrow Airport.* Experts and officials expect that more U.S. airlines would seek to provide nonstop service from their hub airports into London's Heathrow Airport. Both consumers and "new entrant" airlines (those that would gain access to the airport) could benefit from the new service. Access to Heathrow by other U.S. airlines would provide consumers with greater choice, service from more U.S. destinations, and possible competitive pressures on price. New entrant airlines would benefit from being able to carry passengers into a valued destination. However, because of capacity constraints at Heathrow, it may be some time before these potential benefits for U.S. airlines and passengers emerge.
- *EU airlines could launch competitive transatlantic service from an airport now dominated by another EU airline.* For example, Lufthansa Airlines might decide to initiate nonstop passenger service between Paris and Miami—a market now generally divided between Air France (with its alliance partner Delta Air Lines) and American Airlines. Airline officials said that they would be unlikely to establish a significant presence at another airline's hub, however, because of operating and marketing barriers to establishing competitive service there.
- *Consolidation within the EU aviation industry could increase.* Ending nationality clause restrictions would remove a barrier to consolidation of the EU aviation industry, because airlines would no longer have to be concerned about whether a merger would jeopardize traffic rights that are granted under current agreements. Mergers could potentially affect U.S. consumers in a positive way if such consolidation would create an additional competitor or provide access to new "on-line" service. However, mergers can also have negative effects if, by combining into one airline, the number of competitors in a market falls. Although industry experts and officials anticipate that EU airlines will merge, they did not agree on the timing and nature of any additional consolidation.
- *EU airlines could relocate to other EU nations with lower wage costs.* While increased competition is likely to force airlines to become more cost-efficient, we did not find substantial evidence to indicate that airlines would consider such relocations in the near term. Airlines

would still need to locate operations based on where passenger demand exists, rather than on where the lowest wages could be paid. However, the 10 newest EU nations, which joined the EU in May 2004, have an average gross domestic product that is 40 percent of the average for the 15 other EU countries, so the possibility for such actions cannot be dismissed.⁶ Because transnational unions do not currently exist within the EU, organized labor has raised concerns about how employee rights could be protected were companies to relocate to or form subsidiary operations in other EU countries.

Background

U.S. and EU Domestic Airline Markets Are Largely Deregulated

A dominant theme of the commercial airline industry in the United States and the EU in the past 2 decades has been one of decreased government economic regulation. This development began in the United States with passage of the Airline Deregulation Act of 1978, phasing out federal regulation of rates, routes, and services for domestic airlines. EU aviation deregulation began in 1987 and led to the creation of a single European aviation market.⁷ In 1993, the EU efforts mirrored U.S. deregulation by removing all government restrictions on routes, fares, and capacity, as well as barriers to cross-border investment of European airlines. By 1997, the EU removed the final operating restriction by allowing cabotage within the EU. Deregulation has allowed substantial growth in both U.S. and EU airline operations and passenger traffic, with consumers on both sides of the Atlantic benefiting from decreased fares and increased service. As

⁶European University Institute, *Enlarging the European Union: Achievements and Challenges* (Mar. 26, 2003).

⁷Prior to the establishment of a single EU internal market, European aviation was governed by individual bilateral agreements between pairs of European nations. These bilateral agreements normally restricted the airlines that could provide service, the number that could provide service, the level of service, and the fares airlines could charge. European deregulation included eventual “cabotage rights” that allowed any EU airline to provide domestic service within any EU member state. (Cabotage refers to operations in which an airline of one country operates flights and carries traffic solely between two points in a foreign country.) The EU has international agreements with three other European countries. It has a bilateral air services agreement with Switzerland providing for comprehensive liberalization of air services, except cabotage, and through the European Economic Area Agreement, Iceland and Norway are fully included in the EU air transport market, including cabotage.

airline operations and passenger traffic grew, U.S. and EU aviation industry employment increased as well (see table 1).

Table 1: Changes in Domestic U.S. and EU Aviation Markets and Employment

Type of change	U.S. since deregulation (1978-2002)	EU since deregulation (1993-2002)
Annual average percentage change in revenue passengers enplaned	3.3%	6.1% ^a
Annual average percentage change in number of pilots	3.9%	3.7% ^b
Annual average percentage change in pilot compensation/expenses ^c	3.4%	3.1% ^b
Annual average percentage change in real (or inflation adjusted) airline yields ^d	-2.7%	N/A ^e

Source: GAO analysis of data from DOT, Air Transportation Association, and Association of European Airlines.

^aBased on data from 25 Association of European Airline members.

^bBased on data from 15 Association of European Airline members.

^cPilot compensation percentage changes do not reflect possible changes in negotiated work rules. According to Air Inc.'s 2004 U.S. Airlines Salary Survey, work rules include, among other things, the maximum number of hours worked per month, payment for hours above the maximum, and number of vacation days.

^dYield is an industry term denoting the price (in cents) a revenue passenger pays to fly one mile. Yield does not include aviation taxes, which are remitted directly to the taxing authority and never recorded in carrier financial statements.

^eComprehensive yield data for all EU carriers is not available.

Open Skies Agreements Extend Partial Deregulation to Transatlantic Routes

For many decades, international air service has been governed by aviation agreements that are based on the principle that nations have sovereignty over their airspace. This sovereignty is defined by nine “freedoms of the air” that have developed over time to outline possible aviation rights between countries.⁸ During a 1944 international civil aviation convention in Chicago, the participating countries decided that international aviation would be governed by negotiated bilateral aviation agreements that specify “traffic rights,” such as the number of airlines that can operate between markets, the airports from and to which they operate, the number of flights

⁸These traffic rights and nine freedoms are shown in appendix II.

that can be provided, and the fares that airlines could charge. These aviation rights, including the right to prevent foreign airlines from cabotage operations, have been the basis for international aviation.

Under traditional bilateral agreements, air services can only be offered by airlines that are licensed and designated by the two countries that sign the agreement. To be licensed to provide commercial air services, an airline must meet various legal and regulatory requirements. Among these requirements are citizenship and control tests, which require that an airline be majority-owned and effectively controlled by citizens of the licensing country.⁹ In the United States, the airline must also meet economic fitness and safety requirements. EU law establishes a framework for the granting of airline licenses and air operators certificates,¹⁰ but all Community airlines licensed by EU member states in accordance with EU law are permitted to provide transport throughout the EU. The process by which countries indicate which airlines are authorized to provide service under the agreements is called “designation.” Designation has traditionally indicated that the country making the designations will ensure appropriate regulatory oversight. This responsibility extends to ensuring that the airline complies with international civil aviation safety and maintenance standards.¹¹

Open Skies agreements are a particular kind of bilateral agreement. They remove the vast majority of restrictions on how airlines of the two

⁹The U.S. permits up to 25 percent foreign ownership of voting stock in U.S. airlines (49 USC 40102); the EU permits up to 49 percent foreign ownership of its airlines. The administration has proposed raising the existing U.S. limits to match the EU’s.

¹⁰Under these common rules, all air carriers licensed in the EU are considered to be “Community carriers” and have equal rights. Through their agreements with the EU, Switzerland, Norway, and Iceland have aligned their licensing systems with Community law.

¹¹In the United States, once licensed and designated, an airline still must receive authorization from DOT to operate in specified international markets before it can provide the service. A foreign air carrier of a sovereign state desiring to conduct foreign air transportation operations into the United States files an application with the DOT for a foreign air carrier permit. Consistent with international law, bilateral agreements normally provide that a partner country must meet International Civil Aviation Organization (ICAO) safety oversight standards as a condition for service by its designated airline. FAA is also responsible for safety oversight of U.S. airlines and for ensuring that foreign countries comply with the ICAO standards. To assess a country’s ability to meet this standard, the FAA established the International Aviation Safety Assessment (IASA) program in 1992. This program focuses on ensuring that a foreign country adheres to international standards and recommended practices for aircraft operations and maintenance established by the ICAO.

countries signing the agreement (signatory countries) may operate between their respective territories. For example, they remove prohibitions on the routes that airlines of the signatory countries can fly, or the number of airlines that can fly them.¹² These expanded operational rights represent significant alterations to the traditionally more restrictive bilateral agreements that specified service frequency, capacity, routing, and pricing.

While they granted more rights to airlines of the signatory countries, Open Skies agreements, through the nationality clause, allow the U.S. government to block airlines of other countries from these rights. For example, while both Germany and France have Open Skies agreements with the United States, the German-based carrier Lufthansa is not permitted by either France or the United States to operate flights between France and the United States, without it being a continuation of a flight that originates in Germany.¹³ Yet according to DOT officials, if it is deemed “not inimical” to U.S. interests, DOT can waive the ownership and control requirements. For example, DOT officials stated that, under the multilateral Open Skies agreement signed with Brunei, Chile, New Zealand, and Singapore, it applied a more flexible definition of the nationality clause for nations covered by the agreement and focused on ensuring that the airlines covered by that agreement are “effectively controlled” by nations that signed the agreement.¹⁴ Table 2 summarizes some of the key differences between traditional bilateral agreements and Open Skies agreements.

¹²While Open Skies provides expanded traffic rights, airlines may be limited in exercising these rights due to restrictive bilateral agreements with other nations. For example, Russia might not allow a U.S. carrier to pick up passengers in Frankfurt and carry them on to Moscow, even though the U.S. Open Skies agreement with Germany would permit such operations to points beyond Germany.

¹³In addition to these nationality restrictions, both Open Skies agreements and traditional bilateral agreements permit one country to deny permission to operate to airlines designated by the other country if those airlines are not substantially owned and effectively controlled by its citizens. However, some Open Skies agreements do allow cargo carriers to operate seventh freedom rights.

¹⁴The Multilateral Agreement on the Liberalization of International Air Transportation was signed in 2001. Since then, Peru, Tonga and Samoa have also acceded to the agreement.

Table 2: Summary of Key Differences between Traditional Bilateral Agreements and Open Skies Agreements

Type of agreement	Service capacity	Service frequency ^a	Fares	Extended traffic rights
Traditional bilateral agreements	Restrictions on which airlines can operate	Restrictions on what markets airlines may serve and the number of flights that can be flown	Restrictions on pricing	Restrictions on operations to and from additional countries
Open Skies agreements	No restrictions on the number of airlines that may operate No restrictions on what markets airlines may serve	No restrictions	No restrictions on pricing	Allowance for open rights to and from additional countries

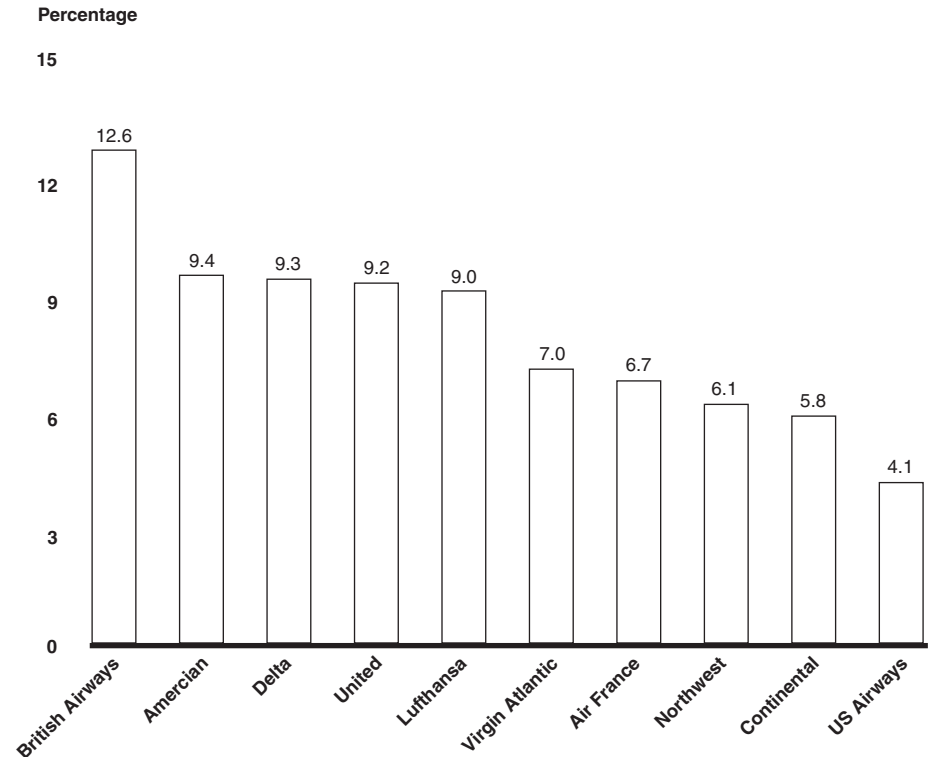
Source: GAO analysis of U.S. Department of State and U.S. Department of Transportation data.

^aGovernments are allowed to restrict operations at airports due to environmental regulations. For example, 44 EU airports reported having night flight restrictions.

The U.S.–EU market grew from 28 million annual passengers in 1990 to over 51 million passengers by 2000, representing the most important international market for U.S. airlines. British Airways is the largest carrier in the U.S.–EU market, followed by American, Delta, and United Airlines (see fig. 1). Neither U.S. nor EU low-cost carriers currently offer transatlantic services.¹⁵

¹⁵For additional information on the operations and recent financial success of low-cost airlines, see U.S. General Accounting Office, *Commercial Aviation: Despite Industry Turmoil, Low-Cost Airlines Are Growing and Profitable*, GAO-04-837T (Washington, D.C.: June 3, 2004).

Figure 1: Largest U.S. and EU Airlines Based on Percentage of Total U.S. - EU Traffic Carried, 2002



Source: GAO analysis of DOT data.

Open Skies Agreements Have Benefited Consumers and Airlines by Removing Restrictions on International Air Service

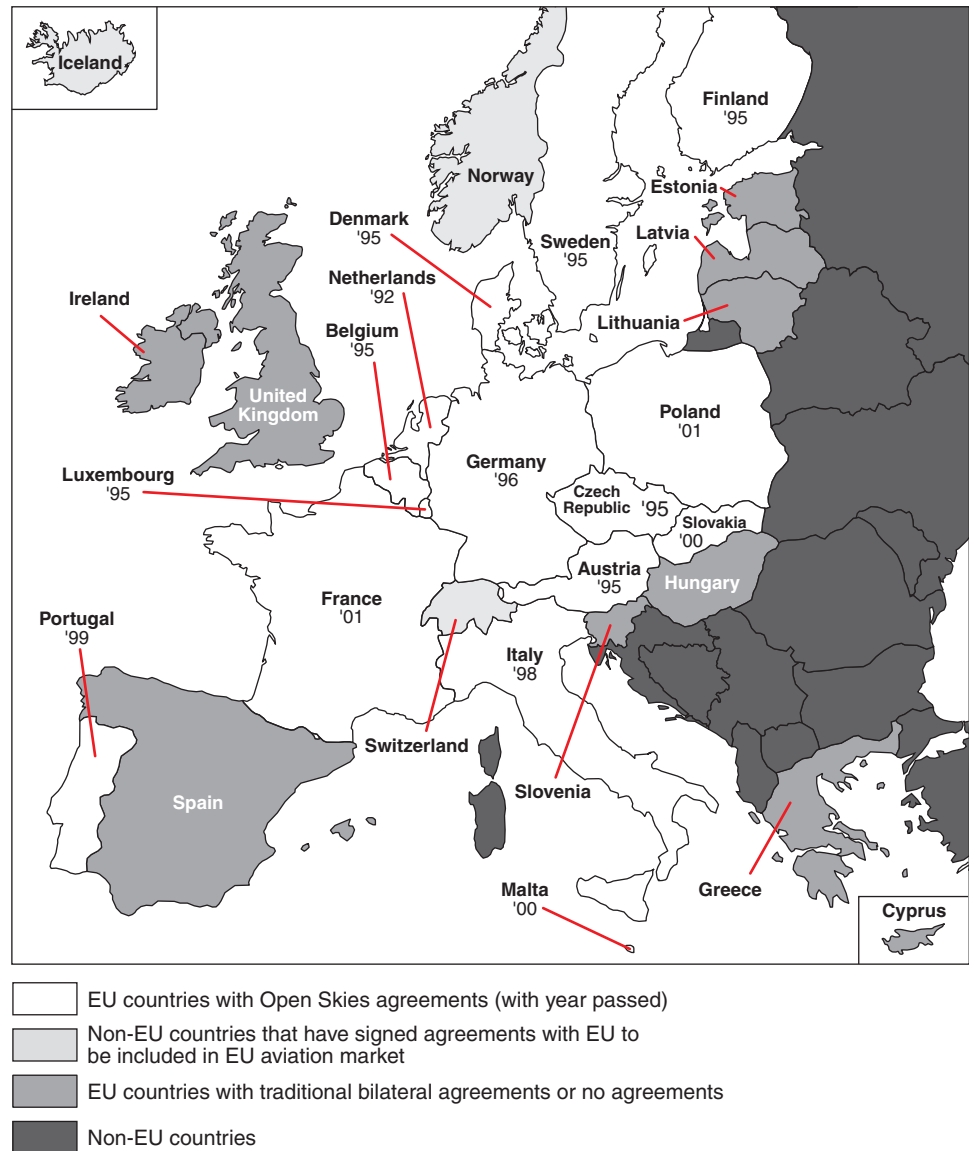
Consumers and airlines have benefited from Open Skies agreements that the United States has signed with 15 individual EU member nations. The number of such agreements has grown over time, although 10 EU member nations, including the largest U.S. aviation partner, the United Kingdom, still have more restrictive bilateral agreements or no agreement at all. Open Skies facilitated the formation of more integrated international alliances between U.S. and EU airlines, which allowed the airlines to expand their networks and provide competitive service for more passengers to more locations at cheaper fares. As a result, U.S. passengers have been able to pay less to reach most EU destinations, significantly increasing passenger traffic.

The United States Has Open Skies Agreements with the Majority of EU Nations

Since signing the first Open Skies agreement with the Netherlands in 1992, the United States has entered into agreements with 15 of the 25 EU nations (see fig. 2). The United States signed nine of these agreements by 1996. Since then, the United States has signed Open Skies agreements with six EU member states: Italy, Malta, Poland, Slovakia, Portugal, and France.¹⁶

¹⁶In May 2004, 10 European nations were accepted into the EU: Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia. Czech Republic, Malta, Poland, and Slovakia had already signed Open Skies agreements with the United States prior to their entry into the EU.

Figure 2: EU Member States with Open Skies Agreements



Source: GAO.

While the majority of EU member states have signed Open Skies agreements, 10 EU member states maintain bilateral agreements that are more restrictive than Open Skies agreements or have no aviation agreement with the United States. The United States does not have any

aviation agreement with Cyprus, Estonia, Latvia, Lithuania, and Slovenia. EU member states that have traditional bilateral agreements include Greece, Ireland, Spain, Hungary, and the United Kingdom. For the five countries with bilateral agreements but without Open Skies, the types of restrictions vary from agreement to agreement. For example:

- The U.S.–Spain agreement does not permit U.S. airlines to code-share¹⁷ with any of their EU partners from intermediate points elsewhere in Europe. For example, United Airlines cannot place its code on any Lufthansa flight from Germany to Spain. The resulting “interline” service tends to be both more expensive and more inconvenient than code-shared routes, placing them at a competitive disadvantage.¹⁸
- The agreement with the United Kingdom, commonly referred to as Bermuda 2, restricts service between the United States and London’s Heathrow airport to two airlines from each country—at present, American and United from the United States, and British Airways and Virgin Atlantic from the United Kingdom. In addition, the agreement limits nonstop service into Heathrow by U.S. airlines to 12 specified U.S. cities. UK airlines can operate from Heathrow to 11 specific cities, plus other cities where there is no U.S. airline competitor. Despite these restrictions, London’s Heathrow airport (Heathrow) accounted for the highest percentage (over 20 percent) of U.S.–EU passengers of any European airport between 1990 and 2002.

¹⁷“Code-sharing” refers to the practice of airlines applying their names—and selling tickets via reservations systems—to flights operated by other carriers.

¹⁸Interline fares are most frequently the sum of the fares charged by each airline for its segment of the itinerary. Even when tickets are purchased well in advance to take advantage of possible airline discounting, such fares tend to be considerably higher than on-line fares from the same origin to the same destination.

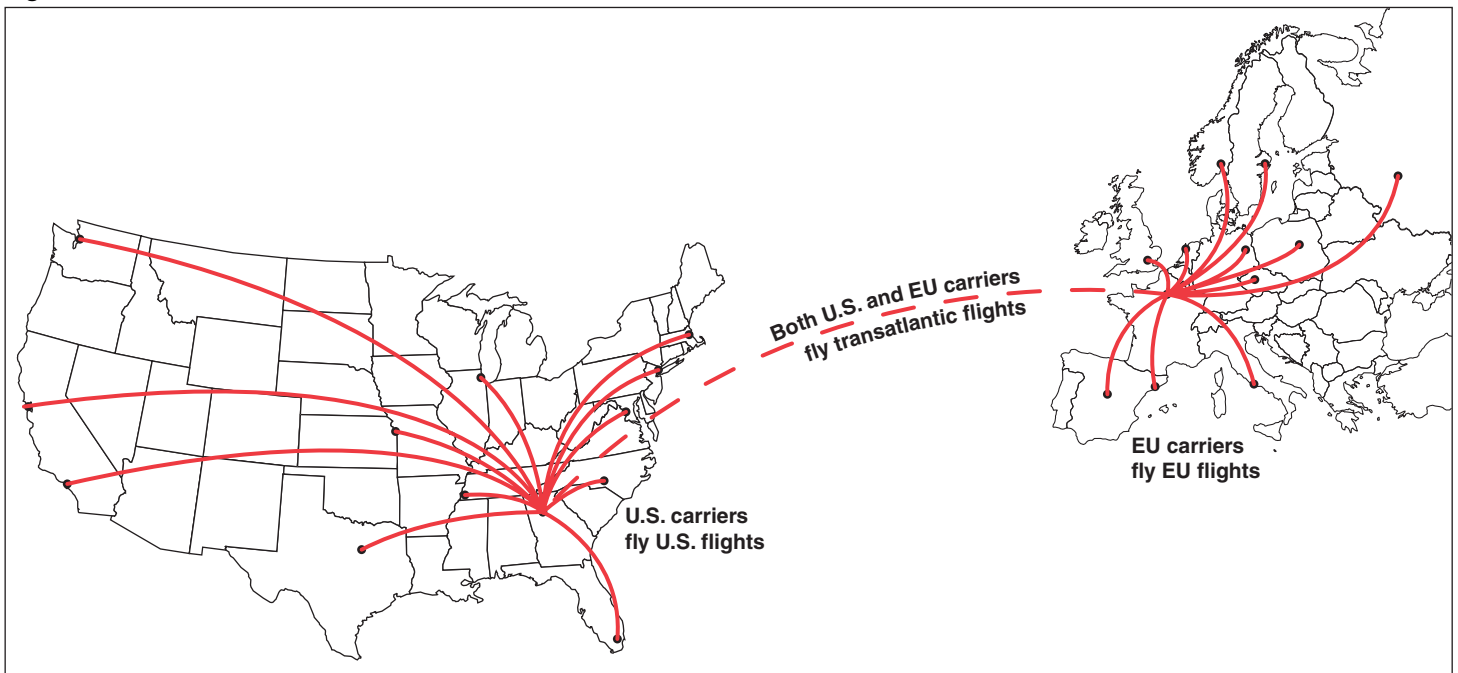
Open Skies Agreements Enhanced Creation of Airline Alliances and Subsequent Expansion of Airline Networks

Open Skies agreements greatly changed how U.S. and EU airlines provide international service. The change centers on the alliances that various U.S. and EU airlines have formed with each other.¹⁹ Operating in an alliance allows an airline to greatly expand its service network, without having to increase the number of routes it flies using its own aircraft. In the simplest case, an international code-sharing alliance links the route network of one airline with the route network of another, forming an end-to-end alliance with little overlap (see fig. 3). In this way, alliances have allowed airlines to expand the number of markets that received “on-line” service between the U.S. and EU.²⁰ Airline passengers prefer this type of “seamless” service, compared to interline service, because it allows the convenience of single ticketing and check-in, among other things.

¹⁹Many industry experts consider alliances as a second-best option to full mergers, because alliances do not allow the airlines to achieve the full range of cost savings through operational efficiencies that could be possible through a merger. Current restrictions on foreign ownership and control limit the extent to which airlines can pursue international mergers.

²⁰On-line service provides passengers with connecting flights without requiring them to change airlines. Similar conveniences can be obtained between two airlines that have “interline” agreements. Although interline agreements do not incorporate fare coordination, they may provide for the mutual acceptance by the participating airlines of passenger tickets, baggage checks, and cargo waybills, as well as establish uniform procedures in these areas.

Figure 3: Illustration of How Alliance Networks Link Markets



Source: GAO.

Alliances greatly increase the number of markets that can be served on-line because they connect locations that were otherwise served only by one of the alliance airlines. This concept, illustrated in figure 3, allows networks to serve “behind-and-beyond” markets. Transatlantic flight occurs between what are called “gateway” airports, such as Atlanta and Paris. A “behind” point is a location that feeds passenger traffic into the gateway airport on one side of the Atlantic, while “beyond” points are those destinations that can be reached once a passenger has traveled to the gateway airport on the other side of the Atlantic. For example, Kansas City, Missouri, and Berlin, Germany, constitute a “behind-and-beyond” market. Neither city has nonstop transatlantic service, so passengers from either destination must first fly to a gateway airport. A passenger originating a trip in Kansas City would have to take a flight into a gateway airport (such as Atlanta), connect to a transatlantic flight to an EU gateway (such as Paris), and then connect onto a flight to Berlin.

Most major U.S. airlines that provide transatlantic service (American, Delta, United, Northwest, US Airways, and Continental) belong to

international alliances with other airlines, including many from the EU. To more closely integrate scheduling and pricing, alliance partners may request that they be given immunity from national antitrust laws, which would otherwise prohibit potential competitors (i.e., the alliance partners) from coordinating pricing and services.²¹ DOT has granted antitrust immunity to most of the alliances that U.S. airlines have with EU airlines. Beginning with Northwest and KLM Royal Dutch Airline (KLM) in 1993, DOT approved antitrust immunity for U.S. airlines with 18 international alliance partners. Yet not all alliances have received antitrust immunity. U.S. policy stipulates that only airlines from countries that have signed Open Skies agreements with the United States can receive antitrust immunity.²² The efforts to obtain antitrust immunity for an alliance between American and British Airways has twice failed, in part because the United States was unable to obtain an Open Skies agreement with the United Kingdom and the airlines were not willing to cede Heathrow slots as required by competition authorities. American and British Airways are limited in the number of markets in which they can code-share, and are not permitted to coordinate market scheduling and pricing in the same way as other airlines that do have antitrust immunity. (See appendix IV for summary information of the major international alliances.)

Consumer Benefits Have Resulted from Expanded Alliances and Networks

Various studies have found that the alliances and expanded networks created since the first Open Skies agreements have produced significant benefits for consumers. Two studies conducted by DOT found that the

²¹U.S. law gives the Secretary of Transportation the authority to grant immunity from U.S. antitrust laws to agreements in foreign air transportation. In general, the antitrust laws are designed to protect consumers by prohibiting competitors from colluding and engaging in such anticompetitive behavior as jointly setting prices (commonly referred to as “price fixing”). The Secretary may grant immunity if an agreement is in the public interest and is necessary to permit implementation of an approved cooperative agreement. The Department of Justice (DOJ) role is advisory, and its analysis is performed pursuant to the Sherman Antitrust Act and the Clayton Act, which set forth antitrust prohibitions against restraints of trade. For the European Union, the Directorate General Competition (DG Comp) is responsible for enforcing Articles 81 and 82 of the EC Treaty, which prohibit activities that fix prices, limit production, or exercise market dominance to distort competition.

²²While the signing of an Open Skies agreement does not guarantee that airlines from signatory nations will be granted antitrust immunity, Open Skies is now a requirement for antitrust immunity. For example, DOT approved antitrust immunity for the alliance between Delta Air Lines and Air France after France signed an Open Skies agreement with the United States in 2002.

development of alliances in transatlantic markets led to consumer benefits in the form of more competitive service and more extensive networks.²³

We found that international network airlines serve the majority of U.S.-EU city-pair markets with no worse than double-connection (i.e., two-stop) on-line service. Based on scheduled flights for May 2004, 83 percent of the possible U.S.-EU markets (5,165 of 6,210) were scheduled to receive on-line service with nonstop, single-connection or double-connection service.²⁴ More than half of those markets were served by nonstop or single-connection flights. Table 3 summarizes the connectivity of major U.S.-EU markets. (Additional markets may also have received on-line service, but the service would have required more than two connections and would thus be excluded from our analysis.)

²³DOT, *International Aviation Developments: Global Deregulation Takes Off* (Washington, D.C.: Dec. 1999) and *Transatlantic Deregulation: the Alliance Network Affect* (Washington, D.C.: Oct. 2000).

²⁴We limited our analysis of scheduled service to airports serving larger communities in both the United States and EU. In the United States, we included only airports defined as Large, Medium, or Small hubs. Large hubs are statutorily defined as having 1 percent or more of all annual passenger boardings at primary U.S. airports, medium hub airports as having between 0.25 percent and 0.99 percent of boardings, and small hubs as having between 0.05 percent and 0.249 percent of boardings. In the EU, we included only airports defined as Category 1, 2, or 3 hubs. The Airports Council International defines Category 1 airports as having more than 2 million boardings per month, Category 2 as having between 1 million and 2 million boardings per month, and Category 3 as less than 1 million boardings per month. For additional information on this analysis, see appendix I.

Table 3: U.S.-EU Markets Served with Nonstop, Single-Connection or Double-Connection Flights

Best level of service scheduled	Number of markets	Percentage of markets	Example of market served
Nonstop	174	3.4%	New York–London (Heathrow)
Single connection	2,640	51.1	Kansas City–Atlanta–Paris
Double connection	2,351	45.5	Oklahoma City –Chicago – Copenhagen–Helsinki
Total	5,165	100.0%	

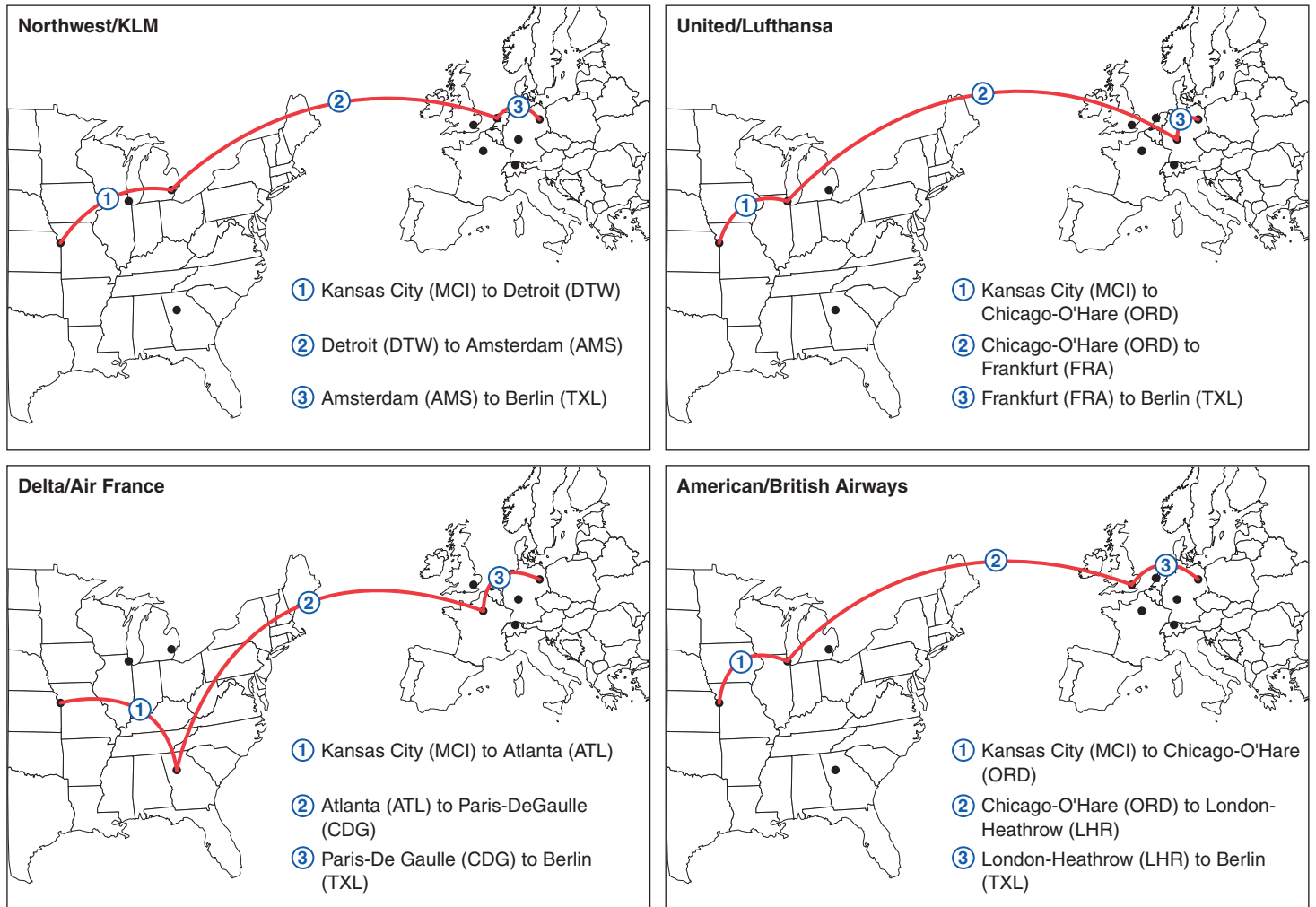
Source: GAO analysis of Sabre, Inc., May 2004 airline schedule data.

^aWe categorized markets based on the best level of service, which generally refers to the fastest possible service (i.e., having the least number of connections). Markets were placed in a single category. For example, although several airlines offer connecting service between Chicago and London, because other airlines serve that market with nonstop flights, we categorize it as a nonstop market.

In addition, consumers in most U.S.-EU markets have a choice of service from more than one competing airline or alliance. Figure 4 illustrates that consumers flying between Kansas City and Berlin have four different competitive alternatives. In the 174 nonstop markets, 71 percent have at least three airlines providing either nonstop service or competitive single-stop service.²⁵ In markets where the best level of service is one-stop or on-line single connections, over 85 percent have at least three competitors, and in markets where the best level of service involves two connections, 60 percent have three or more competitors (see fig. 5).

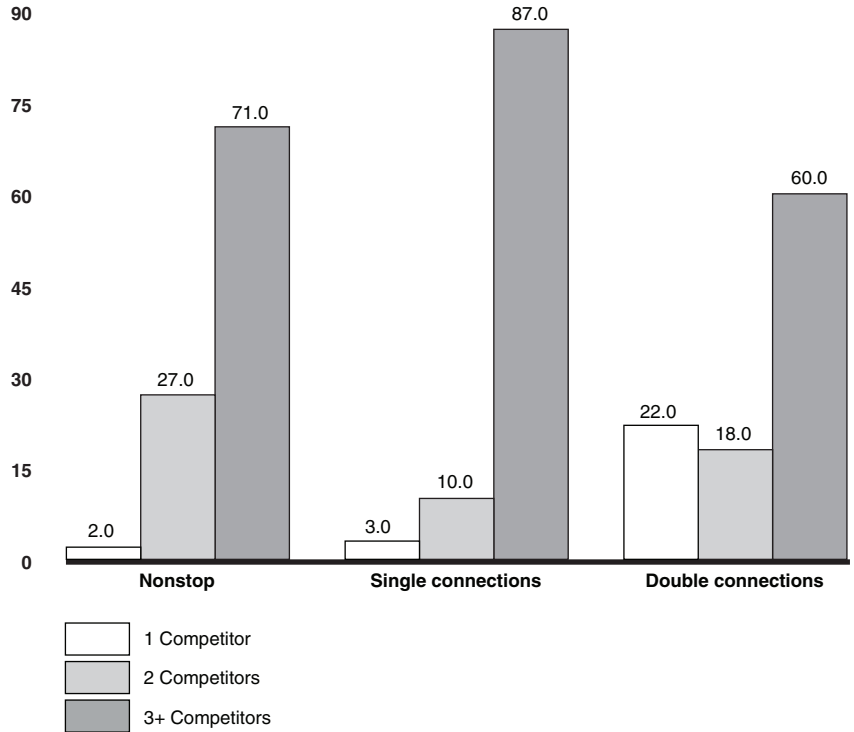
²⁵In our analysis of the number of competitors serving particular markets, we first determined the best level of service available in each market and then calculated the number of competitors in each market. For example, in any given market, competing airlines may offer nonstop, single-connection, or double-connection flights. The double-connection would not be considered a truly competitive alternative to the nonstop flight. However, single-stop service may be considered a viable competitive alternative. Thus, Continental, American, and Delta, which all offer single on-line connections between San Francisco and Frankfurt, would all be considered competitors to United, which offers nonstop service. In this case, we categorize the San Francisco–Frankfurt market among the nonstop markets, and count it as having four competitors. Similar to definitions used in the past by DOT and the Department of Justice, we defined an airline as being “competitive” in a market if it provided at least 10 percent of scheduled capacity. If alliance partners with antitrust immunity both served a market, we combined their capacity and identified the alliance (not individual airlines) as being one competitor. (For additional information, see app. I.)

Figure 4: Customers in the Kansas City to Berlin Market Have Multiple Trip Options



Source: GAO analysis of Sabre, Inc., May 2004 scheduling data.

Figure 5: Most U.S.-EU Markets Served by Three or More Competitors
Percentage



Source: GAO analysis of Sabre, Inc., May 2004 scheduling data.

Between 1996 and 1999, according to DOT, within Open Skies countries, fares dropped an average of 20 percent, compared to a 10 percent fare decrease in non-Open Skies markets (see table 4). These differences are consistent across the various categories of markets, such as gateway-to-gateway markets and behind-beyond markets. Much of the decrease has been attributed to the incentive for alliances to offer lower-priced on-line service rather than the higher-priced interline

connecting service.²⁶ DOT officials noted, however, that little if any analysis of changes in airfares and service has been completed that would examine any changes in the market since September 2001.

Table 4: Changes in Average Fares in Transatlantic Markets, 1996 versus 1999

Type of market	Behind–beyond markets	Behind–gateway markets	Gateway–beyond markets	Gateway–gateway markets	Average for all market categories
Open Skies markets	-23.9%	-19.9%	-24.8%	-17.0%	-20.1%
Non-Open Skies markets	-13.2%	-14.6%	-15.8%	-5.1%	-10.3%

Source: DOT.

Note: Fares are not adjusted for inflation.

Addressing the European Court of Justice Decision Will Affect Commercial Aviation in Four Key Ways

Industry and government officials with whom we spoke generally said that the Court of Justice decision—particularly as it relates to likely changes in the existing nationality clause in the Open Skies agreements and the bilateral agreement with the United Kingdom—will affect commercial aviation in at least four key ways, depending on the eventual outcome of negotiations between the United States and EU.²⁷ These experts agree that complying with the Court of Justice decision will require that nationality-based restrictions be eliminated. The four key areas raised by potential changes to the nationality clause are closely intertwined and are as follows:

- A new U.S.–EU agreement that would address the nationality clause issue would likely supersede the five existing restricted bilateral agreements and also would become effective in the five EU nations

²⁶Prior to alliances, passengers could travel between two smaller markets using two different airlines that did not offer any coordination of schedules or pricing. Each airline priced its own segment of the trip, to maximize its own profits without considering the opportunities for both carriers to jointly profit. The lack of coordination also required separate ticketing and baggage processing. As airlines began code-sharing, they offered coordinated on-line services with conveniences preferred by passengers.

²⁷As indicated by the European Council’s rejection of the June 2004 draft agreement, additional issues can be linked to the new accord, such as changes in limits of allowable foreign ownership of U.S. airlines or providing EU carriers with cabotage rights within the United States.

where no agreement currently exists. It would thus provide U.S. airlines with expanded legal traffic rights (i.e., rights to operate between two destinations) into what are now restricted markets. However, capacity limitations at certain key airports might restrict U.S. airlines' ability to exercise this new right.

- Eliminating the nationality clause restrictions means that the United States would recognize all EU airlines as "European Community" airlines. These airlines, which currently can provide transatlantic passenger service only between the United States and airports in their own country, would have the ability to provide service between the United States and any EU country.
- Because nationality-based restrictions would no longer apply, one major barrier to European transnational mergers would no longer exist. EU-based airlines could more freely consolidate, create subsidiary operations, or relocate their businesses to any location within the EU without jeopardizing their rights to fly to the United States.
- The increased operating flexibility that EU airlines would receive raises questions as to which EU member state's regulatory oversight and labor laws should apply in particular situations. If an EU airline moved its operations to (or established a subsidiary carrier in) another EU country—perhaps to take advantage of lower wages or other cost savings—questions are likely to arise as to which member state's regulatory framework and labor laws would apply.

U.S. and EU officials agree that both sides must eventually reach some agreement on resolving the nationality clause issue in order to comply with EU law. However, there is no set time frame for when the matter must be settled. In November 2002, the EU called for member nations to renounce their Open Skies agreements with the United States, but did not pursue the request in response to receiving a negotiating mandate. It is uncertain how a prolonged inability to remedy the nationality clause issue might affect U.S. and EU commercial aviation, in part because such issues have never arisen before.

Extension of Open Skies Model Would Provide U.S. Airlines with Additional Traffic Rights

U.S. airlines would gain expanded legal traffic rights under a new U.S.-EU agreement. According to U.S. and EU industry and government officials, a new agreement would supersede and be binding on all EU member states, thereby removing most remaining traffic right restrictions.²⁸ Because the Open Skies agreements between United States and 15 member states have already effectively eliminated traffic restrictions in those markets, there would be no significant gains in traffic rights for U.S. airlines, although EU airlines would gain expanded traffic rights or operations to and from those countries. However, U.S. airlines would gain rights to serve markets, from which they had been previously restricted, with the other 10 EU countries.

Extending the Open Skies framework and rights to all EU member states would be necessary in order to prevent a critical imbalance of economic rights from developing that would place U.S. airlines at a potential competitive disadvantage. Unless Open Skies rights were extended to all EU nations, any country with which the United States now has a more restrictive bilateral agreement would be able to benefit from rights negotiated by other countries without itself having to negotiate for those rights. In other words, those countries (and their passengers and airlines) would benefit from the actions of others without “paying” for them—an outcome known as “free riding.” A free-rider scenario would occur between the United States and EU if an airline from a non-Open Skies country were able to operate from an Open Skies country to circumvent restrictions in the home country’s bilateral agreement. For example, a UK airline could originate a flight in France with a commuter aircraft, change to a wide body aircraft at London’s Heathrow airport, and then continue on to the United States to a point not designated under Bermuda 2 with hundreds of additional passengers. This would put U.S. airlines at a competitive disadvantage because the current bilateral agreement with the United Kingdom prevents any U.S. airline from flying similar routes.

U.S. Airlines Would Gain Access to Restricted Markets

One key operational right that U.S. airlines would gain is full legal nonstop access to all markets in the 10 countries with which the United States still has more restrictive bilateral agreements or no agreements. The most noteworthy of these 10 is the United Kingdom, because of the amount and value of passenger traffic that moves between the two countries. Bermuda 2’s limits on competition disproportionately affect U.S. airlines because the United Kingdom successfully negotiated for additional traffic

²⁸The EU mandate does not include negotiating new route rights beyond the EU.

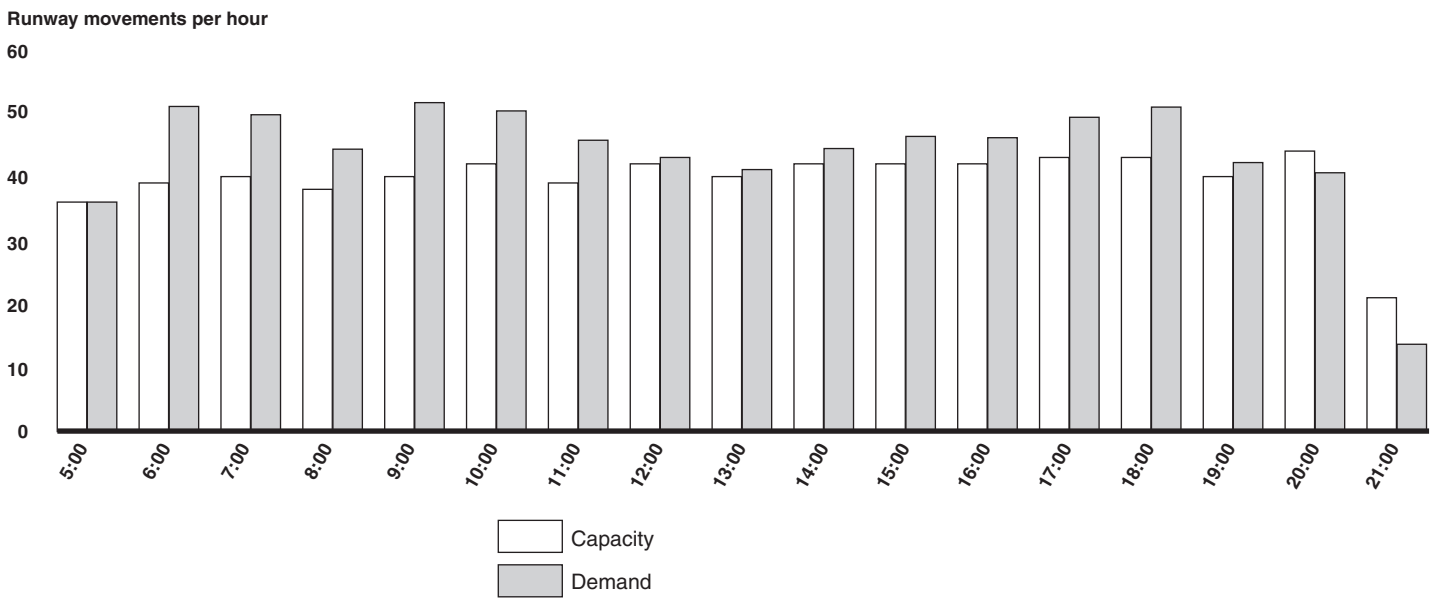
rights in the early 1990s. Partly as a result, between 1992 and 1996, the UK airlines' share of the U.S.-UK market rose from 49 percent to 59 percent.²⁹ Today, UK airlines still provide more service in the U.S.-UK market, especially into Heathrow. As of May 2004, British Airways and Virgin Atlantic scheduled a total of 43 daily nonstops from Heathrow to the United States, compared to 28 daily nonstops offered by American and United.

While a new U.S.-EU agreement could eliminate the legal restrictions on the number of U.S. airlines permitted to operate into Heathrow, capacity limitations would affect the extent to which U.S. airlines would be able to operate there. Heathrow is essentially operating at full capacity, especially at times that are commercially viable for transatlantic operations. According to airline and industry officials, the commercially-preferred times for transatlantic arrivals into Heathrow are between 6 a.m. and 10 a.m., and the commercially-preferred times for transatlantic departures from Heathrow are between 10 a.m. and 2 p.m. These times are based on airlines being able to coordinate their transatlantic flights with feeder flights from their spoke airports. However, as figure 6 shows, the demand for arrival (and departure) slots during these times generally exceeded the available supply.³⁰

²⁹U.S. General Accounting Office, *International Aviation: Competition Issues in the U.S.-U.K. Market*, GAO/T-RCED-97-103 (Washington, D.C.: June 4, 1997).

³⁰A slot is a specific time when airlines are allowed to take-off and/or land.

Figure 6: Comparison of Total Runway Capacity and Demand at Heathrow, Summer 2004 Demand for Arrivals



Source: Airports Coordination, Ltd.

Note: The demand for slots is calculated from requests from individual airlines for the right to operate at particular times. Demand is calculated as a 7-day average. Capacity and demand for departures are similar to capacity and demand for arrivals.

U.S. Airlines Would Gain Fifth Freedom Rights

If the U.S. Open Skies framework were extended to all EU countries following the removal of the nationality clause restrictions, U.S. airlines would gain full “fifth freedom rights,” including to and from EU member states with restrictive bilateral agreements. These fifth freedom rights would allow U.S. airlines to operate flights from the United States to any EU country and then beyond to another EU country. However, traffic rights to countries beyond the EU would be limited to those the United States already has under its Open Skies agreements; the EU has no current mandate to grant new “beyond rights.” Open Skies agreements, by definition, grant airlines the unrestricted right to operate fifth freedom flights, which are otherwise limited under the more restrictive bilateral agreements, such as the agreement with the United Kingdom.

Airline officials and industry experts maintain that over time, however, fifth freedom rights available from countries that have Open Skies agreements have proven to be of limited commercial value to passenger airlines. (Cargo airlines, on the other hand, greatly value fifth freedom rights. See appendix

III for additional information on cargo carriers.) United, for example, attempted to exercise fifth freedom rights for operations with Open Skies countries in Europe, but abandoned those operations after determining that they were not profitable. United officials explained that, with the development of alliances, it is more cost efficient to use alliance partners to provide connecting service into “beyond” markets. Of the U.S. passenger airlines that have fifth freedom rights with EU countries, only two airlines exercise these rights. Northwest operates fifth freedom flights from Minneapolis that stop in Amsterdam and continue to Bombay, India. Delta flies from Atlanta to Bombay using fifth freedom rights over Paris.³¹

U.S. Airlines Would Gain Code-Sharing Rights

Under the terms of the more restrictive bilateral agreements with Spain and Greece, U.S. airlines are prohibited from serving those markets by way of code-share flights. This effectively prohibits, for example, passengers using a United ticket from traveling from Albuquerque to Madrid by connecting at Frankfurt, Germany, to a United code-share flight operated by its Star alliance partner Lufthansa. If the Open Skies framework were extended throughout the EU, such prohibitions would be eliminated. Airlines would be able to offer new routings to passengers, and passengers would be free to choose among new options for travel into those countries.

EU Airlines Would Be Able to Establish Transatlantic Routes between the United States and Other EU Countries

Like U.S. airlines, EU airlines would have greater access to international markets. Eliminating nationality clause restrictions included in existing agreements effectively means that, in any new agreement, the United States could recognize the concept of a “European Community” airline.³² This could mean, for example, that rights originally restricted to designated airlines of the signatory countries would be available to all European

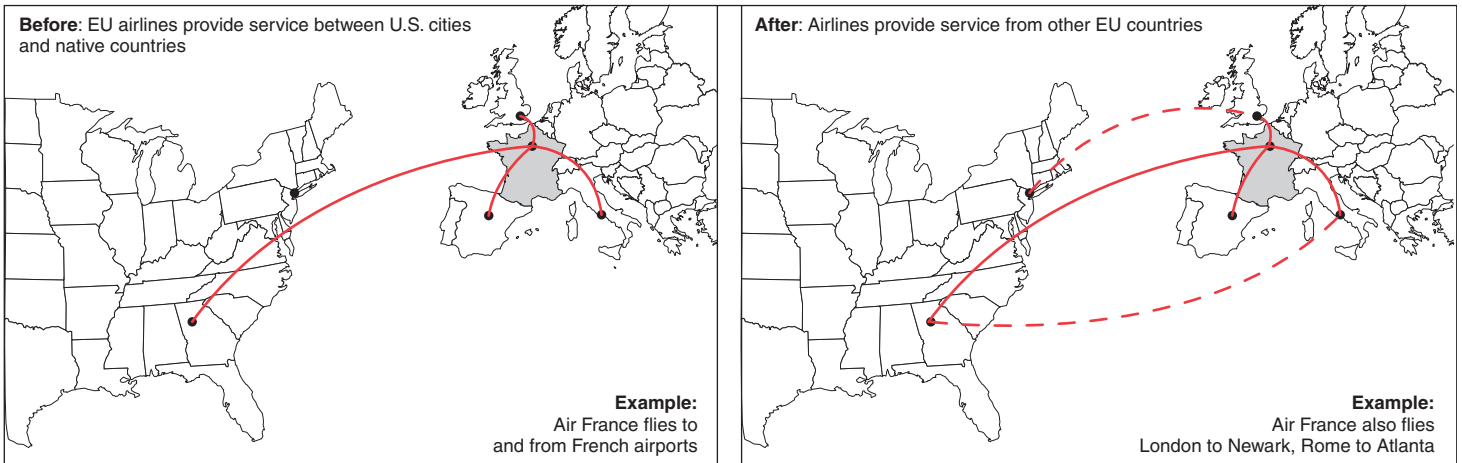
³¹Several officials from the EU, EU members states, and EU airlines suggested that, to balance the fifth freedom rights within the EU that U.S. airlines would gain, they should be allowed to operate continuation flights within the United States. For example, after deplaning passengers at Washington Dulles International Airport, a British Airways flight arriving from Heathrow should be allowed to continue to St. Louis. The return flight to London would thus originate in St. Louis and stop in Washington. On such flights, British Airways could carry local St. Louis-Washington passenger traffic. U.S. officials note, among other things, that such operations would constitute “consecutive or fill-up cabotage” (so-called “eighth freedoms”) not equal to the fifth freedoms already negotiated with EU member states. Such operations would require a change in U.S. law. We excluded analyses of the potential effects of such cabotage from this report.

³²EU airlines would still need to obtain formal DOT approval to operate into the United States.

Community airlines. In other words, Lufthansa, British Airways, and LOT Polish Airlines would be European Community airlines in addition to being German, British, and Polish airlines. If the United States recognized a European Community airline, it would have the right to operate transatlantic flights directly to and from more EU destinations. Under current Open Skies agreements, the right to establish transatlantic routes between destinations in the signing countries is limited to airlines licensed in and designated by those two countries and is under the ownership and control of the country's citizens. For example, Air France—an airline licensed and designated by France—is not allowed under existing Open Skies agreements to provide nonstop transatlantic service between cities in the United States and Italy; it can fly only between U.S. and French cities.³³ Under an Open Skies agreement that included an EU nationality clause, Air France would have the right to fly between any EU city and any city in the United States. In theory, Air France could also decide to establish a mini-hub in a city outside of France, where it could potentially begin providing nonstop service into additional U.S. cities. This same flexibility would extend to all EU airlines and to all U.S.-EU markets. In this way, EU airlines, regardless of the EU country in which they were licensed, would have the ability to provide flights into the United States from throughout the EU (see fig. 7).

³³ Air France can use its fifth freedom rights to provide service between Italy and the United States only if that flight originates in a French city, stops in Italy, and then continues to the United States.

Figure 7: Potential Effect on Transatlantic Service of the Removal of the Nationality Clause Restrictions



EU Airlines Will Have Greater Ability To Restructure and Operate Transatlantic Service

Eliminating nationality-based restrictions would remove a major barrier that has prevented EU airlines from restructuring their operations by merging with another airline or creating significant commercial operations in locations outside their home countries, without sacrificing traffic rights across the north Atlantic. Because international traffic rights are granted by two signatory nations and are tied to national ownership and control, an airline operating an international service cannot merge with a carrier from another EU member state without risking the loss of these U.S. traffic rights. Similarly, because the traffic rights are tied by designation and nationality clause to airlines from particular countries, airlines also cannot move operations into another country and exercise those rights.

Eliminating nationality-based restrictions would allow citizens of any EU nation to exercise what is called the “right of establishment.” Under the Treaty of Rome, any EU citizen has the right to establish a business in another EU state. Removing nationality-based restrictions would allow EU airlines to restructure operations, such as merging with another EU airline or relocating in another EU member state, to gain economic efficiencies without losing traffic rights into the United States.³⁴ For example, EU

³⁴The EU recently approved the merger of Air France and KLM under the current Open Skies agreements. For details on this merger see appendix V.

airlines could relocate operations to or establish subsidiaries in EU member states that have lower average wages and (from a business perspective) more lenient labor laws. Controlling costs associated with labor (i.e., “social costs,” which include wages, benefits, and pensions, and which also define the number of hours in the work week) is important to an airline’s ability to compete with lower-cost or more efficient airlines, because those costs can represent a major portion of an airline’s operating costs.

Under an agreement in which the United States would recognize a European Community airline, EU airlines could take the following actions.

- *Acquisitions or mergers*—EU airlines could engage in cross-border airline mergers and acquisitions without jeopardizing traffic rights to the United States.³⁵ Some observers of EU aviation have long believed that the large number of relatively small state-supported airlines created a fragmented, inefficient system burdened with excess capacity. The suggested remedy was consolidation of the European industry.
- *Moving operations to another country*—EU airlines could move some or all of their operations to other EU countries without risking the loss of traffic rights. For example, an existing airline, such as Austrian Airlines, hypothetically would be able to move its operations into and establish itself in Poland and still be able to provide service into the United States from anywhere in the EU.
- *Creating subsidiary operations*—EU airlines could set up subsidiary operations outside of their home countries that could provide transatlantic service.³⁶ Because these subsidiaries could be established anywhere in the EU, they could potentially take advantage of lower costs that might be available in some EU countries.

³⁵Several officials noted, however, that because EU member states continue to have restrictive bilateral agreements with other important airline markets (i.e., Japan and China) that continue to include nationality clauses, consolidation would still jeopardize those traffic rights.

³⁶Since the liberalization of air transport inside the EU in 1993, a number of European airlines have established or purchased subsidiaries in countries other than their own, including British Airways (in France and Germany), KLM (in the United Kingdom), Ryanair (in the United Kingdom), and SAS (in Spain and Finland).

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- *Establishing new entrant airlines*--EU citizens in one country could establish an airline in another country and provide service into the United States, provided they met licensing and certification requirements. Citizens from Spain, for example, could establish a new airline in Poland and provide service from anywhere in the EU to the United States.³⁷

Moving Airlines or Operations between EU Countries Raises the Issue of Which Country Would Have Regulatory Authority

While eliminating the nationality clause restrictions may mean that traffic rights are no longer limited, the concept of an airline's being licensed by a particular EU country remains important for regulatory oversight. For issues concerning safety and security oversight of airlines, all governments maintain an interest in having assurance as to which other government remains responsible for assuring the safe and secure operation of airlines that may fly to or from any given location.

While operating a safe, secure carrier is of course important for maintaining consumer confidence in the carrier, ensuring the safe and secure operation of commercial aviation is a fundamental responsibility that is shared by governments and airlines. Under the existing EU framework, this oversight responsibility resides with each country, subject to a framework of European level cooperation and legislation. Thus, one issue that will need to be resolved, if airlines are permitted to shift their operations from one EU country to another, is which country exercises the oversight responsibility.³⁸

A number of criteria have been suggested for determining which country's legal and regulatory system should apply. Traditionally, the country that issued the airline's operating license has been responsible. However, ensuring safety and security would become problematic if an airline relocated its major hub activities to a location possibly hundreds of miles outside the licensing state's borders. Another possible criteria proposed to

³⁷Moving operations, creating subsidiary airlines, or establishing new airlines would be subject to satisfying the licensing and safety authorities in their home country and the receiving country that such a change would not compromise safety standards and other regulatory requirements.

³⁸Issues relating to safety and security regulatory oversight are obviously critical to any comprehensive analysis of aviation. Because of the magnitude of these issues, however, we agreed at the outset to leave them beyond the scope of this report. For additional information on limitations to the scope of this work, see appendix I.

determine which state's systems apply is based on the location of the carrier's "principal place of business." But in an industry in which the assets and employees are mobile, what constitutes an airline's principal place of business is uncertain. While not providing a definition *per se*, the ICAO Air Transport Regulation Panel and the Organization for Economic Co-operation and Development have suggested a set of guidelines that governments could use in determining an airline's "principal place of business."³⁹ These guidelines propose that a "principal place of business" means the country in which an air carrier does the following:

- maintains its primary corporate headquarters;
- regularly provides air transportation service;
- maintains substantial capital investment in physical facilities;
- pays income tax and registers its aircraft; and
- employs a significant number of nationals in managerial, technical, and operational positions.

However, questions arise regarding how to measure the extent to which an airline might meet each of these criteria (e.g., defining and measuring "substantial capital investment").

Officials with major airline unions generally support these criteria. The concern of labor groups is that, unless a relatively stringent standard is applied, airlines will move operations to countries specifically to take advantage of lower costs of doing business (particularly with regard to wage rates and labor laws). Doing so is sometimes referred to as adopting a "flag of convenience," a pejorative term adopted from the maritime industry.

The question of which member state's labor law should apply to a situation is the subject of a current legal challenge brought by employees of the EU low-fare carrier Ryanair at the Charleroi Airport in Belgium. Ryanair is headquartered in Ireland and has bases located in Stansted, United Kingdom; Frankfurt/Hahn, Germany; Stockholm, Sweden; and Charleroi,

³⁹Organization for Economic Co-operation and Development, *Liberalization of Air Cargo Transport* (May 2, 2002).

Belgium. It employs nonunionized pilots. All of Ryanair's pilots, regardless of where they are based, are employed under Irish labor law and pay Irish taxes. In May 2002, Ryanair did not retain three employees after these employees had completed Ryanair's 1-year probationary period. The employees at Charleroi charge they were wrongfully terminated under Belgian law. The question for the EU courts is whether Ireland or Belgium's labor laws would apply in this instance.

U.S. Consumers, Airlines, and Labor Groups May All Benefit from Changes in Agreements, Although Extent of Benefits Is Uncertain and Gains May Not Be Realized Immediately

Eliminating the nationality clause restrictions from the new U.S.-EU agreement would likely provide new benefits to consumers, airlines, and labor groups. By eliminating the nationality clause restrictions, a new agreement would in effect extend the Open Skies framework to the 10 EU member countries without Open Skies agreements. This could potentially provide the same benefits that consumers, airlines, and labor groups realized after the signing of the current Open Skies agreements. However, because of mitigating circumstances, these benefits will take some time to develop, and they will be contingent on resolving a number of related issues (e.g., de facto access to restricted airports). Experts and industry officials with whom we spoke generally agreed that eliminating the nationality clause restrictions would mainly increase the potential for the following:

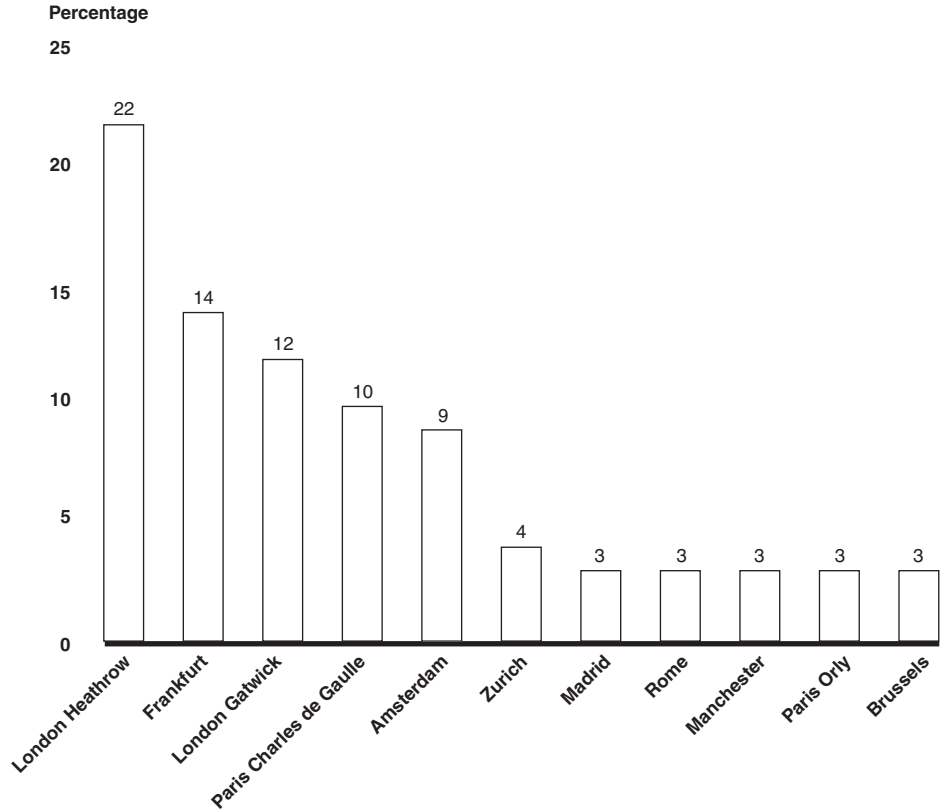
- More U.S. airlines might attempt to provide nonstop service from their hub airports into London's Heathrow Airport.
- EU airlines might use their new ability to establish transatlantic routes between U.S. cities and EU destinations outside of their homeland.
- More transnational mergers might occur between EU airlines.
- An EU airline might attempt to establish a "flag of convenience" operation—that is, the airline might move some or all of its operations to another EU country with lower wage or other costs.

Each of these actions would allow airlines to more freely respond to market forces and consumer demand. As in other instances where government removed restrictions on airlines, such as domestic deregulation and Open Skies agreements, consumers could potentially benefit from increased competition and therefore better service and lower fares.

New Entry by U.S. Airlines Into Restricted Markets Would Benefit Consumers, but Access to London's Heathrow Airport May Be Limited by Current Slot Allocation Process

Officials at some U.S. airlines said a major potential benefit of a new agreement would be the opportunity for access to markets restricted by the existing bilateral agreements. Similar to the experience of current Open Skies agreements, U.S. consumers and airlines would benefit from gaining access to the 10 restricted markets, such as the United Kingdom, Spain, Ireland, and Greece. The likely source of the greatest benefit would be London's Heathrow Airport, since it is the largest destination for U.S. travelers (see fig. 8). If a new agreement extended the U.S. Open Skies framework to all EU member states, it would remove the restrictions of the Bermuda 2 agreement. U.S. airlines with no current access to Heathrow would gain the right to operate there. For example, Continental Airlines, which currently has no Heathrow access with its own aircraft, would be able to begin service into Heathrow from any U.S. airport, including its hubs at Newark, Houston, and Cleveland. (Continental now operates flights from those hubs into London's Gatwick Airport and code-shares with Virgin Atlantic into Heathrow.) Because Heathrow is the major U.S.-EU gateway, many U.S. airlines view the opportunity to gain access to this market as a positive benefit.

Figure 8: Top EU Markets Based on Total Percentage of U.S.- EU Passenger Traffic from 1990-2002



Source: GAO analysis of DOT data.

Access to Heathrow by additional U.S. airlines represents potentially positive benefits to consumers and airlines. Consumers would benefit from gaining greater choice of airlines, service from more U.S. destinations, and possible competitive pressures on price. For example, if all U.S. airlines now serving London by flying into Gatwick switched their operations to Heathrow, London-bound consumers would benefit because access to central London is faster and easier from Heathrow. In addition, consumers in Denver and Detroit, who now have flights into Heathrow only on British Airways, would likely benefit from the additional competitive presence on those particular routes. Airlines that do not now have access to Heathrow would benefit from being able to carry passengers into a valued destination. Even though these airlines operate to London's Gatwick Airport, they have reported losing high-yield business passengers and

corporate accounts to competitors because of their inability to provide service to Heathrow.

For consumers and airlines to realize such benefits, however, airlines would first need to gain de facto access to airport slots, gates, and terminal space. Because Heathrow is already operating essentially at full capacity, a new entrant airline would have to gain access through the existing slot allocation process, which provides limited opportunities for new entrants--airlines with no more than four slots per day (the equivalent of two daily takeoffs and landings). Each year, the number of slots that become available through the normal slot allocation process is equivalent to about five daily takeoffs and landings.⁴⁰ Existing EU slot allocation regulation requires the slot coordinator⁴¹ to set aside 50 percent of any slots that become available for distribution to new entrants.⁴² Before those slots are made available, however, incumbent airlines have limited rights to acquire any open slot and substitute another they already hold. Incumbent airlines can use this process to “trade up” slots they hold at less desirable times for newly available slots that might be for more commercially advantageous times. This effectively relegates the slots available to new entrants to commercially less desirable times. However, once a new entrant does obtain slots, it can gain slots at more commercially viable times through a grey market, which is used by airlines to trade slots. These trades are allowed during any point of the year and are often done so for payment. The EU does not officially condone this grey market, although a 1999 decision by a UK court found this system to be acceptable within European law.⁴³ The EU has recently initiated proceedings against this system.

⁴⁰Slots generally become available in three ways. First, airlines can lose any slot they do not use at least 80 percent of the time. Second, if an airline fails, it must surrender its slots. Third, slots can be created based on technical improvements in operations, either on the ground or in air traffic control. Examples of such improvements include shortening the time aircraft spend on the runway or smoothing the peaking of demand within an hour.

⁴¹Each EU nation’s slot coordinator is responsible for managing the slot allocation process for operations at one or more of the country’s airports.

⁴²EU regulations also generally grant priority consideration for slots to airlines meeting certain conditions. For example, an airline would receive priority consideration for slots if it holds less than 5 percent of the slots at an airport and is seeking to use those slots to provide service to an EU market in which two or fewer other airlines compete. Incumbent airlines already having relatively large slot holdings are not allowed to qualify for such priority consideration.

⁴³25 March 1999, in *R v Airport Co-ordination Limited ex parte*. The States of Guernsey Board of Transport.

While some officials have pointed out that the slot allocation process does give priority to allocating slots to new entrant airlines, there is disagreement regarding the effectiveness of this process in assisting new entrants. Once a new entrant airline acquires five or more daily slots, it is no longer considered a new entrant and then must compete for any available slot as an incumbent airline. To gain additional slots for transatlantic operations, a new incumbent airline with five slots would have to compete against British Airways, with over 500 daily slots, and Virgin Atlantic, with just over 30 daily slots (in the Summer 2004 scheduling season).

Another option for U.S. airlines to gain slots is based on the reallocation of slot resources between alliance partner airlines. Some airline officials said that, once the legal restrictions are removed, international alliances with substantial numbers of Heathrow slots could reallocate these slots between alliance members, thereby providing U.S. airlines with some access to Heathrow slots. Some European airlines have stated that this option would be discussed within the alliance; others maintained that alliance partners would be hesitant to trade or sell slots to other alliance members, because the Heathrow operations likely add considerable revenue to their own network. Alliance partners may also be hesitant to trade or sell slots because, although the alliances are established through legal contracts, past experience has shown that airlines can and do move out of alliances. Thus, a slot sold or traded might be permanently lost or used against the airline in the future. Finally, even if an alliance partner may have a slot that theoretically could be put to more productive commercial use by trading or selling it to another alliance partner, other capacity constraints at Heathrow could prevent its use for transatlantic operations. For example, a slot (with its associated Jetway and terminal facilities) used for 40-passenger turboprop operations could not readily be transformed for use by a 400 passenger Boeing 747.

Given the limits imposed by these slot allocation options, it may be some time before the potential benefits for U.S. airlines and passengers emerge. Some European airline officials have pointed out that gaining access to slots, gates, and terminal space at Heathrow can be done over time. They cite Virgin Atlantic as an example of an airline that originally obtained slots at less preferable times and, over time, acquired additional slots and traded them with other airlines. Through trading, Virgin Atlantic gained a number of slots at prime times. In Virgin Atlantic's case, it applied for and obtained six daily slots once the UK government designated it as one of the two British airlines allowed to provide transatlantic service from Heathrow in

1991.⁴⁴ By 1996, it had obtained approximately 15 daily slots, which rose to 28 daily slots by 2001. Airline officials reported that between 1996 and 2001, the airline gained an additional five pairs of daily slots to the United States. As of the 2004 summer schedule, Virgin Atlantic will have just over 30 daily slots. That total includes four pairs of slots that Virgin Atlantic was able to acquire this year for about 20 million British pounds (approximately \$36 million).

Airlines may also gain access if capacity at Heathrow expands. Heathrow's capacity may increase over time through capital improvements and changes in operations.

- The first phase of a new terminal at Heathrow, Terminal 5, is expected to be operational in 2008 and could ease terminal and aircraft parking capacity constraints related to passenger holding areas and aircraft gates. With the completion of the second phase in 2011/2012, this new terminal is expected to handle 30 million annual passengers and will include 45 aircraft parking stands.⁴⁵ British Airways is expected to be the principal tenant at the new terminal, and its relocation there will allow other airlines (possibly new entrants) to gain access to facilities in other terminals. However, the new terminal will have no direct impact on the number of available runway slots.
- BAA, plc,⁴⁶ is examining the potential to implement a "mixed mode" runway operation, which would allow both runways to be used for landings and takeoffs rather than assigning one runway for landings only and one runway for takeoffs only.⁴⁷ The examination will need to take account of potential noise and air quality implications. There are no official estimates of the impact on runway capacity of a change to "mixed mode," but BAA, plc, has suggested that this change could

⁴⁴Prior to 1991, Virgin Atlantic was not allowed to use Heathrow, but instead was required to use Gatwick. As part of the revision of the bilateral agreement in 1991 between the United States and United Kingdom, Virgin Atlantic was allowed to transfer much of its service from Gatwick to Heathrow.

⁴⁵Some of the 45 parking stands will be "remote" stands rather than stands accessed via a pier and Jetway.

⁴⁶BAA, plc, is a private airport company that owns seven UK airports, including Heathrow, Gatwick, and Stansted, and has interests at 13 airports overseas.

⁴⁷Heathrow currently limits the use of its two runways so that one is used only for takeoffs and the other is used only for landings.

increase slot capacity by 10 per hour. However, it is unclear if the UK government will approve this change due to opposition by local communities related to the expected increase in noise.

- The UK government's 2003 report on the future of air transport supported further development of Heathrow, including a new runway and additional terminal capacity, but only after a new runway at London's Stansted Airport was finished and only if stringent environmental limits could be met.⁴⁸ The report indicated that any additional future enhancements to Heathrow's capacity would be completed within the 2015-2020 period.

A report commissioned by the EU on the effects of different slot allocation approaches concluded that current EU slot regulation provides incumbent airlines an advantage and makes it difficult for new airlines to obtain slots to introduce new or more frequent service.⁴⁹ It also concluded that if the EU adopted various market mechanisms (such as secondary trading, increased slot prices, or slot auctions), higher passenger volumes would occur. The report did not recommend that the EU commission require divestiture of slots as a condition of airline mergers. However, in its approval of the Air France–KLM merger, to ensure that new entrant airlines could provide new competitive service on certain markets, the EU commission sought the surrender of 94 daily slots from Air France and KLM.⁵⁰ Generally, incumbent airlines object to such events, arguing that

⁴⁸United Kingdom Department of Transport, *The Future of Air Transport* (Dec. 2003).

⁴⁹National Economic Research Associates, *Study to Assess the Effects of Different Slot Allocation Schemes: A Final Report for the European Commission, DG TREN* (Jan. 2004).

⁵⁰Slots are to be made available at Amsterdam, Paris, Lyon, Milan, or Rome. The EU stated that the surrendering of slots would enable rival airlines to start a service where competition would have been eliminated or significantly reduced, therefore preserving choice of airlines and competitive prices for European travelers. Air France and KLM have committed to surrender these slots.

they own the slots and would have to be compensated for them.⁵¹ BAA, plc, officials also voiced the concern that forcing incumbents to surrender slots each time a new entrant wanted to gain access to the airport was not permitted in the EU slot regulation and would create an undesirable precedent, in part because of the instability it would create for incumbent airlines' operations.

While a new U.S.–EU agreement would provide U.S. airlines with legal access to markets that are now restricted, airline officials stated that, without actual physical access, these new legal rights would be meaningless. This is especially true for access to Heathrow. The current slot allocation process at Heathrow gives incumbent airlines an advantage to help maintain and improve their position, making it difficult for new entrants to gain effective commercial access. Therefore, it may take an indeterminate amount of time before consumers and airlines derive significant benefits from a more open Heathrow.

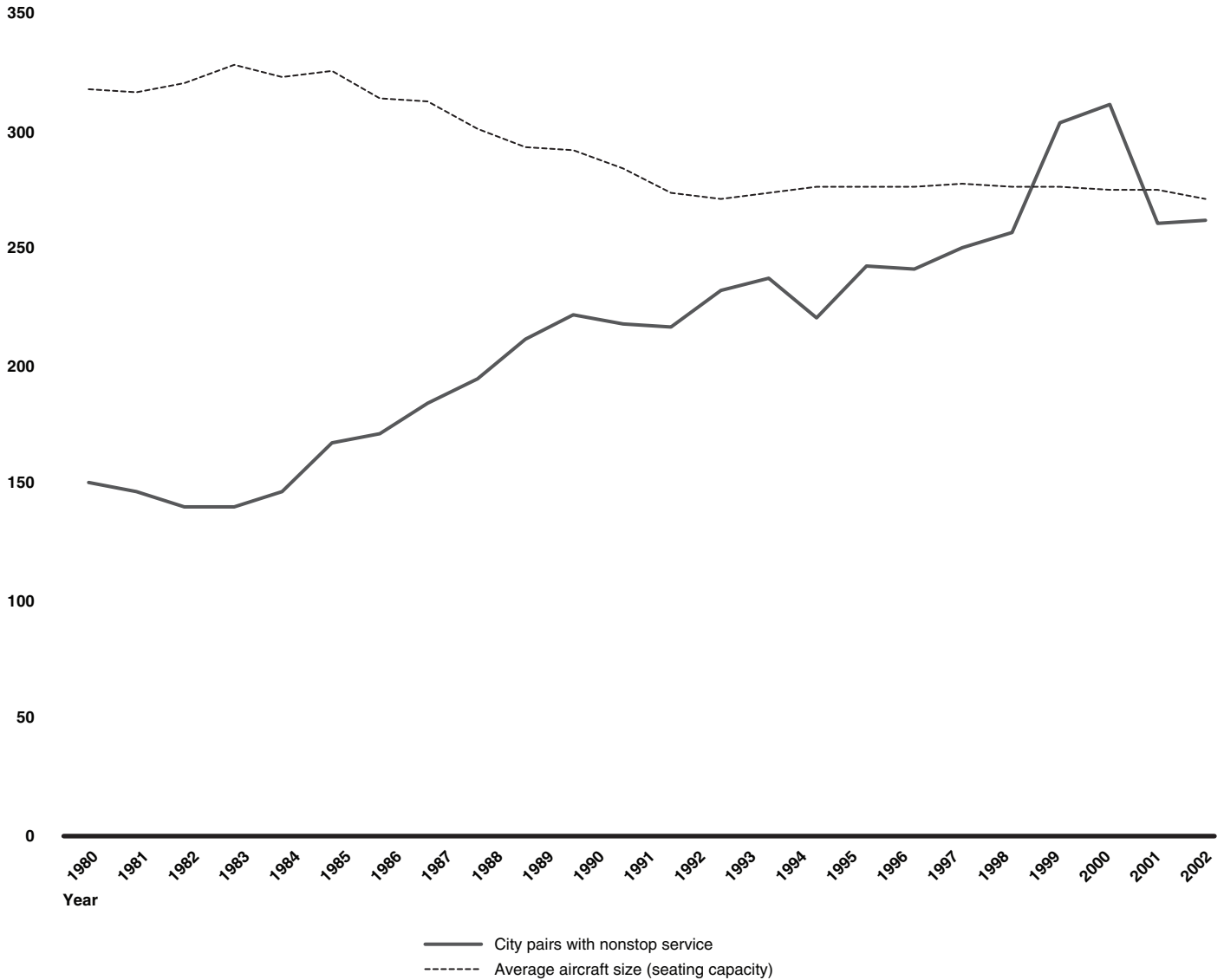
EU Airlines' New Ability to Provide Service in More Markets Could Increase Competition, but Entry May Be Limited

Absent the nationality clause restrictions, EU and U.S. airlines could begin offering new transatlantic service between more cities. New competition has the potential for generating various benefits for consumers: transatlantic service to and from more cities, increased choices—and possibly pressure on prices—on existing routes, and pressure on airlines to provide higher quality service. Some officials said that increased consumer demand for nonstop point-to-point service could spur airlines to develop new city-pair markets. For example, a carrier could start nonstop service from Berlin to Kansas City, neither of which, as of May 2004, had direct transatlantic service.

⁵¹In the “explanatory memorandum” to the proposal presented on 20 June 2001 to revise the slot allocation rules, the European Commission stated that slots should be considered as “public goods” allocated to airlines to be used under certain conditions. Slots are created by decision of the State and exist only as long as “capacity is not sufficient to meet actual or planned operations.” While EU regulation 95/93 defines a slot as “the scheduled time of arrival or departure available or allocated to an aircraft movement on a specific date at an airport coordinated under the terms of this regulation,” it did not create any ownership rights. The Phase I revision (Regulation 793/2004 of 21 April 2004), which will be enacted on July 30, 2004, redefines slots to mean “the permission given by a coordinator in accordance with this Regulation to use the full range of airport infrastructure necessary to operate an air service at a coordinated airport on a specific date and time for the purpose of landing or takeoff as allocated by a coordinator in accordance with the Regulation.”

The Boeing Company expects that consumer preference for nonstop flights, congestion at major airports, and new technology will push airlines to develop new nonstop city pairs. According to Boeing officials, between 1980 and August 2001, as the transatlantic market has developed, the total number of city pairs served with nonstop flights more than doubled, in part because airlines were able to connect those markets using aircraft with smaller capacities (see fig. 9). Boeing projects that, between the United States and EU, an additional 114 city pairs could support nonstop service with 250-seat aircraft. It cites San Francisco–Milan, Houston–Madrid, and Seattle–Frankfurt as possible examples.

Figure 9: Change in Nonstop City Pairs and Average Aircraft Capacity across the North Atlantic



Source: The Boeing Company.

Note: Data were drawn for the month of August in each year.

The development of new nonstop service or new competition in existing markets would offer consumer benefits. Clearly, consumers would benefit from having nonstop service on new city-pair markets rather than connecting service. If airlines chose to compete on other airlines' existing

routes, the presence of additional airlines on a route could not only provide consumers with more choices of flight times during the day, but also could act as a competitive force on service quality and price. In the United States, consumers at dominated airports experience higher average airfares than do those at more competitive airports.⁵²

Although removal of the nationality clause restrictions would theoretically open the door for new competition in various markets, airlines will likely face significant operating barriers in those markets, particularly at dominated hub airports. In the past, we reported that new competition at key domestic airports was inhibited by a lack of access to slots and airport facilities.⁵³ In 2004, an EU report noted that competition at certain key airports continued to be inhibited by lack of available slots at attractive times. The report listed Heathrow, Frankfurt, Madrid, and Paris's Charles de Gaulle airports as having more demand for slots than available capacity, either throughout the day or at peak times of the day.

As in the United States, major European gateway airports also tend to be dominated by a single carrier or alliance.⁵⁴ As table 6 shows, each of the EU's major airports has one airline that controls a much larger percentage of scheduled seat capacity than its next largest competitor. Transatlantic flights to and from these airports are generally dominated by one alliance. For example, Delta and Air France, both members of the Sky Team Alliance, fly 100 percent of the nonstop flights between Atlanta and Paris's

⁵²Dominance at an airport, in and of itself, is not anticompetitive. Nevertheless, research has consistently shown that dominated airports tend to have higher airfares than airports that have more competition from other airlines. An airline's dominance of an airport alone, however, does not demonstrate its market power. One important indicator of the possible exercise of market power is what is known as a "hub premium," which represents the extent to which fares to and from hub cities are higher than average fares on similar routes throughout the domestic route system. Dominated airports tend to have markets with higher airfares than airports that have more competition from other airlines. In 1999, the Transportation Research Board confirmed that dominated hub markets (i.e., markets where either the origin or the destination is a dominated hub) tend to have higher airfares than other markets. This is especially true in short-haul markets. Transportation Research Board, *Entry and Competition in the U.S. Airline Industry: Issues and Opportunities*, Special Report 255 (July 1999).

⁵³See, for example, U.S. General Accounting Office, *Airline Deregulation: Changes in Airfares, Service Quality, and Barriers to Entry*, GAO/RCED-99-92 (Washington D.C.: Mar. 4, 1999).

⁵⁴The Commission's 2002 industry report demonstrates that, at each major EU airport, there was a single alliance that dominated that airport.

Charles De Gaulle airport. United and Lufthansa, both part of the Star Alliance, operate 100 percent of the nonstop flights between Frankfurt and Washington Dulles and 73 percent of the nonstop flights between Frankfurt and Chicago.

Table 5: Comparison of Dominant Carrier’s Scheduled Seat Capacity with That of Next Largest Airline at Major EU Airports

EU airport	Dominant airline	Dominant airline’s percentage total scheduled seat capacity for airport (2002)	Percentage of scheduled seat capacity for next largest carrier (2002)
Madrid, Spain	Iberia	59.3%	9.3%
Frankfurt	Lufthansa	58.8	2.6
Paris Charles De Gaulle	Air France	57.2	4.1
Barcelona	Iberia	52.7	7.7
Amsterdam	KLM	52.5	5.6
London Gatwick	British Airways	51.3	8.6
Munich, Germany	Lufthansa	49.4	8.8
Rome Fiumicino	Alitalia	46.8	8.9
London Heathrow	British Airways	40.5	9.6
Manchester, United Kingdom	British Airways	35.5	10.7

Source: Citigroup Smith Barney, 2003 Hub Factbook.

Sales and marketing practices—which include frequent flier programs and corporate incentive programs—may also impede competition. They do so by reinforcing market dominance at hubs and impeding successful entry by new carriers and existing carriers into new markets. Practices such as frequent flier programs encourage travelers to choose one airline over another on the basis of factors other than obtaining the best fare.

Such factors have a tempering effect on the extent to which EU airlines may seek to launch competitive transatlantic service at these EU gateways. EU airline officials with whom we spoke said they have no plans to establish a significant presence in the hub airports of other airlines. Officials said it would be difficult to successfully compete in a hub against an incumbent airline because of the inherent advantages airlines maintain in their own hub airport. More recent experience has shown however that it is precisely the existence of high premium routes that have attracted low-cost carriers to introduce new competition at or near those high-fare markets, although they often use secondary airports. Experience in both

the United States and Europe has shown that low-cost carriers have increased their presence in major hub airports or secondary airports in major hub markets (i.e., Southwest and ATA at Chicago's Midway airport and easyJet at Gatwick).

Consolidation among EU Airlines Could Affect Consumers Both Positively and Negatively

Consolidation among EU airlines may be more likely if nationality clause restrictions were eliminated, and could lead to a more efficient EU industry structure. Generally, removal of regulatory barriers to industry structure, when accompanied by appropriate competition-preserving antitrust policies, is expected to improve operating efficiencies and promote innovation. The U.S. Department of Justice's Horizontal Merger Guidelines⁵⁵ recognize that competition usually encourages firms to become more efficient. Mergers can also generate significant efficiencies by permitting a better utilization of existing assets, enabling the combined firm to achieve lower costs than either firm could have achieved without the merger. In turn, that may result in lower prices, improved quality, enhanced service, or new products. At the same time, however, because the motivation behind mergers is the prospect of financial gain, mergers are restricted under both U.S. and EU antitrust laws in their ability to create or enhance market power or to facilitate its exercise. Market power in this instance is the ability of a firm to profitably maintain prices above competitive levels for a significant period of time. Thus, while consolidation in an industry through mergers can produce efficiencies and potential consumer benefits, it remains important for antitrust or competition authorities to guard against market abuses.

Analyses we have previously conducted of actual or proposed mergers in the U.S. domestic market suggest that mergers often have both positive and negative effects.⁵⁶ Mergers have the potential for creating positive benefits to consumers in such ways as the following:

- In markets where each of the merging airlines had a relatively limited presence, combining their limited shares can create an additional effective competitor.

⁵⁵U.S. Department of Justice and Federal Trade Commission Revision to the Horizontal Merger Guidelines (Apr. 8, 1997).

⁵⁶See, for example, U.S. General Accounting Office, *Aviation Competition: Issues Related to the Proposed United Airlines-US Airways Merger*, GAO 01-212 (Washington, D.C.: Dec. 15, 2000).

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- Consumers in some markets would benefit from having access to new “on-line” service. For example, when the European Commission recently approved the merger of Air France and KLM, it reported that KLM consumers would gain access to more than 90 new destinations and Air France customers would be offered 40 new routes.
 - Members of the frequent-flyer programs of the merged airlines would be able to use their miles to reach an expanded number of destinations.

Some industry officials and experts said a U.S.–EU agreement removing nationality restrictions would facilitate the opportunity for more cross-border mergers in the EU aviation industry, because EU airlines would not lose important traffic routes into the United States as a result of merger. However, other officials said that restrictive bilateral agreements still held with three other major aviation nations would limit the extent to which airlines would seek to consolidate. The three nations most frequently mentioned were Japan (because of the size and value of the existing market), China (because of the size and value of the potential market), and Russia (because of the implications of overflight rights). For example, Russia and Germany currently have a bilateral agreement that restricts routes and overflight rights to Russian and German airlines. If Lufthansa Airlines were to merge with another EU carrier, it is not clear that Russia would extend these rights to the merged airline. If an EU carrier did not have overflight rights from Russia, its flight times and costs for operations to other Asian countries would increase significantly. These officials said airlines that had received traffic rights and other operating considerations through such agreements might be unwilling to risk losing them through a merger.

A merger can have negative effects on consumers in those markets where the merger reduces the number of effective competitors. This negative effect is increased if the two airlines that merge have significant overlapping markets or if the merger creates an airline that dominates a particular market. Industry experts generally agree that, with dominance in a market, airlines can wield market power and make entry into those markets by would-be competitors more difficult. Therefore, an airline that can wield this market power has the ability to raise fares when unconstrained by competition. Consolidation also raises the possibility that competition in key markets will be reduced, thereby potentially affecting fares and service. The current merger between Air France and KLM illustrates this point. The European Commission noted that the merger would also eliminate or significantly reduce competition on 14 routes,

including 3 transatlantic routes (Amsterdam–New York, Amsterdam–Atlanta, and Paris–Detroit). Air France and KLM have agreed to surrender slots at Amsterdam and Paris, but it is unclear if other airlines will provide effective competition in those markets.

In the absence of specific merger proposals, it is not possible to project the extent to which such positive and negative effects would be present. Some aviation experts maintain that the likely outcome of consolidation is the solidification of three “mega” alliances. These “mega” alliances would provide the vast majority of international aviation service and would be solidified around the Star, SkyTeam, and oneworld alliances, with the major U.S. and EU airlines providing the vast majority of transatlantic service. Some experts question the long-term viability of the existing structure of smaller EU national airlines, such as Austrian Airlines or TAP Airlines. These experts project that such smaller airlines may become regional or niche airlines serving limited markets.

**Major Obstacles Likely
Would Limit EU Airlines
from Moving Operations to
Other Countries, at Least in
the Near Term**

While labor groups and some other stakeholders are concerned that EU airlines may attempt to achieve lower costs by relocating operations or establishing subsidiaries in EU member states that have lower social costs and labor standards, a number of major obstacles could limit airlines from establishing such “flag of convenience” operations. Increased competitive pressure resulting from any new U.S.-EU agreement may lead airlines to seek reductions in operating costs. Because labor represents the single largest portion of these costs, labor groups have expressed concern that EU airlines might consider relocating to EU countries with—from an operating standpoint—more favorable labor laws.

Differences in labor costs and labor law among EU member states certainly exist. According to a 2003 EU study, the newest 10 member states had an average gross domestic product that is 40 percent of the average for the 15 other member states.⁵⁷ The EU has adopted a common set of rules with regard to certain labor policies, such as gender equality, nondiscrimination, and health and safety. Even so, specific regulations and enforcement authority remain with the member states. Additionally, EU member states still maintain their own national labor laws, some of which may provide airlines with more favorable labor environments. Differences remain, for example, in how EU member states regulate collective bargaining. For instance, an EU report stated that the new EU member nations had generally very weak collective bargaining regulations when compared to the other EU member nations.

According to labor representatives, the ability of airlines to relocate to or establish subsidiary operations in other member states would enable airline management to replace the existing workforce with lower-wage workers. Additionally, EU officials stated that there is no EU law regulating the representation, in collective bargaining, by a single employee organization. As a result, workers in the same “craft” (i.e., pilots or flight attendants) employed by a single company but located in different EU member states cannot be represented by a single employee organization. There are, however, common rules concerning the right to information and consultation of employees in Community-scale undertakings and Community-scale groups of undertakings. According to labor representatives, employee representation rights are critical to preventing downward pressure on wages. These rights include single representation for all members of an employee group, including those of subsidiaries and holding companies; the ability to negotiate an agreement; and effective enforcement of a negotiated agreement. Unless labor gains some of those rights, airlines will be able to establish subsidiaries and then substitute lower-wage labor for the existing workforce. A study prepared for the European Cockpit Association, the association of each member state’s pilots unions, argues, that with the increase in inter-company and cross-national alliances, trade unions and employee associations based in single countries and without inter-union networks could be left without an

⁵⁷Wim Kok, *Enlarging the European Union: Achievement and Challenges*,” Report of Wim Kok to the European Commission (Mar. 2003). By comparison, Spain and Portugal had an average GDP per capita of 70 percent of the existing EU.

effective voice in the future restructuring of the industry, such as determining where work will be located and under what conditions.

While many aspects of this issue remain unsettled, we did not find substantial evidence to indicate that airlines would relocate operations or establish “flag of convenience” subsidiaries in lower-wage EU countries, at least in the short term.

- None of the EU airline officials we interviewed indicated a desire to relocate to a low-wage country, citing company branding and markets as being more important in driving business decisions than low-wage labor. Airline officials said that commercial aviation differs from other industries because the product (air travel) must be produced close to the customer base (population and economic centers). Consequently, airlines need to maintain their major operations at key economic centers, none of which are located within the lower-cost countries. Another example that suggests factors other than low-wage labor drive an airline’s business decisions is that EU regional airlines, not bound by international bilateral agreements, have not pursued movement to countries with lower wages and social costs over the last 11 years, despite the fact that such movements were possible after the creation of a single European aviation market.
- Despite the fact that pilots and flight attendants are inherently mobile and could theoretically travel from lower-cost areas to do their work, airlines said it was preferable to locate flight personnel close to the base of operations. Therefore, airlines will have to provide a competitive, market-based compensation package to retain qualified employees. For example, an airline that chose to have a major base of operations in Paris would need to hire employees paid at “market” salaries. To run its daily operation from Paris to Hong Kong, Cathay Pacific Airways, for example, employs 70 French citizens at its Paris offices and Charles De Gaulle Airport. To compete in the labor market for qualified employees, Cathay officials said that it must offer a compensation package that is competitive with that offered by other airlines.⁵⁸

⁵⁸Ryanair also stations its personnel close to their European base of operations; however, all employees are contracted under Irish labor laws, regardless of where they are located. Additionally, according to a 2001 International Labor Organization study, there were at least 10 other EU member states with higher nonwage costs than Ireland.

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- If an airline decided to move its operations to another EU country or import low-wage labor from there, it appears unlikely they would have access to a sufficient supply of appropriately trained personnel. For example, according to EU and airline officials, the number of pilots available in these countries who are trained on aircraft used by the airlines is relatively small.
 - Finally, airline and government officials noted that both U.S. and EU pilots have negotiated scope clauses⁵⁹ that limit the airline's ability to substitute workers from lower-wage subsidiaries for its current workforce (i.e., engage in "labor substitution"). Moreover, available evidence suggests that the creation of the EU's single market has not led to labor substitution.⁶⁰ A report by the UK Civil Aviation Authority stated that, since EU aviation deregulation and the creation of a single market, the United Kingdom had not had any airlines reflagging to a more lax regulatory regime or workers displaced by cheaper workers from other countries in the EU, nor had any UK airlines lost any market share to airlines from lower-wage EU countries, despite the fact that the United Kingdom is one of the higher-wage EU countries.

While there currently appears to be little evidence of serious consideration of relocation or establishment of subsidiaries for access to low-wage labor, the removal of the nationality clause restrictions and the accession of 10 lower-wage member states into the EU does change the market dynamic. EU labor groups said that the benefits of relocating business operations among the 15 countries that comprised the EU prior to May 2004 were limited, since there was not a large wage and social cost disparity between them. Now, the disparities are greater. In addition, one U.S. labor representative said that, while there initially may be little economic incentive for established transatlantic EU airlines to move their operations to countries with lower costs and labor standards, new entrants could use the change in regulatory structure to gain a competitive advantage. Furthermore, over time, there may be economic incentives for established

⁵⁹Scope clauses are found in some union contracts that limit the company's ability to use code-sharing regional or international airlines for its flying.

⁶⁰We did not conduct a direct wage or compensation comparison between U.S. and EU airline employees. While the compensation data for U.S. airline employees were relatively complete, the data for European airlines were frequently incomplete or not available. The social costs between the U.S. and EU also vary, and several officials told us that any comparison of wages or compensation between U.S. and EU airlines would not completely account for those differences.

EU airlines to move their principal places of business or to establish subsidiaries in countries with lower labor standards. Some airline officials cite low-cost carrier Ryanair as an example of a carrier that is taking advantage of the fact that the EU's single market is still governed by individual member states' labor laws, and that pay and working conditions are not subject to collective labor agreements at the European level.

Because of this concern, U.S. labor representatives have proposed that certain protections be included in any draft U.S.-EU agreement that would reduce the incentive for airlines to take advantage of "flags of convenience." One proposal would be to include a definition of "principal place of business" in the draft to help clarify which set of laws would be applied to a given carrier. Including this definition would make it harder for major EU airlines to establish subsidiaries in lower labor standard countries and have those laws applied to them. Setting this standard would also clarify which country would be responsible for overseeing and enforcing safety and security requirements for the airlines.

The success of low-cost carriers like Ryanair and Southwest raises the question of whether existing low-cost carriers could successfully compete in the transatlantic market. Typically, low-cost carriers have succeeded in the domestic market by providing point-to-point service, often at less congested airports. These airlines achieve their comparative cost advantages through lower operational costs (often gained through using a single aircraft type), and greater productivity. Recently, low-cost carriers have begun to compete with network airlines by offering long-haul (transcontinental) service. Under current Open Skies agreements, both U.S. and EU low-cost carriers can provide nonstop flights between the U.S. and the home countries of the EU low-cost airlines. However, it is unclear how low-cost carriers would compete on transatlantic routes. Key aspects of the low-cost carrier business model, notably the higher relative productivity of labor and aircraft and the use of a single fleet type, are more difficult to achieve on transatlantic routes.

Concluding Observations

A new aviation agreement without nationality-based restrictions between the United States and the EU could create additional benefits for consumers and airlines, but would require oversight from antitrust authorities to ensure that the benefits of more open markets in the EU accrue to the traveling public. The existing bilateral aviation agreements between the United States and individual EU countries would need to be modified to resolve legal concerns within the EU, namely the nationality

clause. Depending on the outcome of negotiations between the United States and the EU, the changes could be relatively minor or could result in a comprehensive opening of the U.S. and EU markets. With a new agreement that removed the nationality clause restrictions and expanded the Open Skies framework, U.S. consumers and airlines could benefit from increased access to new destinations within the EU, lower fares from more efficient route networks, and potentially more competitive routes. As discussed in this report, such benefits may be limited because the current alliance structure and bilateral agreements already provide many benefits, and because congestion and limited access to key airports may mitigate or delay the potential benefits. Resolving the EU legal concern over the nationality clause could lead to continued consolidation among airlines within the EU and potentially stronger ties between U.S. and EU airlines. However, mergers such as that between Air France and KLM raise questions about their impact on U.S. consumers because of their antitrust-immune alliance partnerships with U.S. airlines. For example, how might the Air France-KLM merger affect the international operations of their U.S. partners, Delta, Continental and Northwest? In evaluating the potential effects of such a scenario, how would regulators separate the effects or influences of airlines' international operations from their domestic operations? Since other major U.S. airlines participate in alliances with EU airlines, further European industry consolidation would continue to raise such questions.

In the absence of any significant competitive pressure from low-cost carriers flying between the United States and the EU, there is a risk that beneficial elements of potential restructuring could be offset by a reduction in competition between alliances. Antitrust authorities in the United States and EU will need to be vigilant to safeguard the benefits that could accrue from the changing market structure.

The net effect on airlines and consumers will depend on (1) when and to what extent U.S. airlines might gain access to markets that are now restricted, and (2) the business strategies that U.S. and EU airlines adopt. Obviously, the outcomes of any of these developments cannot be predicted. For example, low-cost airlines—which have often been a source of innovation—may find ways to alter their traditional business plans in ways that would make them a competitive alternative to major network carriers in transatlantic service. Past experience has shown that removing government restrictions on aviation (e.g., through domestic deregulation or Open Skies agreements) provided benefits to consumers, airlines, and the industry's workforce. Because those significant benefits have already been

realized, the benefits associated with additional liberalization of the U.S.-EU markets should be similar in nature but incremental in scope. It appears that the greatest source of likely benefits to both U.S. airlines and consumers lies in gaining de facto access to London's Heathrow Airport. How the benefits from access to such restricted markets may compare to those already realized from the other 15 Open Skies agreements ultimately depends on the extent of the increase in competition and changes in airline operations and passenger traffic.

Agency Comments and Our Evaluation

We provided a draft of this report to DOT and State for their review and comment. Neither DOT nor State offered written comments, but did provide technical corrections, which we incorporated as appropriate. In oral comments, DOT's Deputy Assistant Secretary, Office of the Assistant Secretary for Aviation and International Affairs, noted that concluding a new agreement with the EU that would further liberalize transatlantic aviation would provide significant benefits to consumers, airlines, communities, and labor interests on both sides of the Atlantic. DOT believes that establishing a regional air transport agreement between the United States and the 25 members of the EU would establish a template for a more competitive aviation regime on a worldwide basis. Finally, DOT noted that it remains committed to achieving that goal and securing the benefits that it could bring. We also provided selected portions of a draft of this report to the European Commission; airlines; BAA, plc; the Airline Pilots Association; and other groups cited to verify the presentation of factual material. We incorporated their technical clarifications as appropriate.

Unless you publicly announce the contents of this report earlier, we plan no further distribution of this report until 30 days from the date of this letter. At that time, we will provide copies to relevant congressional committees; the Honorable Norman Y. Mineta, Secretary of Transportation; the Honorable Colin L. Powell, Secretary of State; and other interested parties, and will make copies available to others upon request. In addition, this report will be available at no charge on the GAO Web site at

<http://www.gao.gov>. If you have any questions about this report, please contact me or Steve Martin at 202-512-2834. Other major contributors are listed in appendix VI.

A handwritten signature in black ink, reading "JayEtta Z. Hecker". The signature is fluid and cursive, with a long horizontal stroke at the end.

JayEtta Z. Hecker
Director, Physical Infrastructure Issues

Scope and Methodology

At the request of the Chairman and Ranking Minority Member of the Senate Committee on Commerce, Science, and Transportation, and the Chairman and Ranking Minority Member of that Committee's Subcommittee on Aviation, we examined three issues relating to potential changes to existing Open Skies aviation agreements with European Union member states. Specifically, our objectives were to answer the following questions: (1) how prevalent are Open Skies agreements between the United States and EU nations, and what has been their effect on airlines and consumers; (2) what are the key ways that commercial aviation between the United States and EU could be changed by the Court of Justice decision; and (3) how might the elimination of nationality clause restrictions in any new U.S.-EU agreement affect airlines and consumers?

To determine how prevalent Open Skies agreements are and what their effect on airlines and consumers has been, we reviewed prior research from Department of Transportation (DOT), the UK Civil Aviation Authority, the EU Directorate General Transport and Energy (DG TREN), and other aviation research organizations. We reviewed documents from the Department of State (State) to identify the EU member nations with Open Skies agreements and reviewed the five bilateral agreements the United States has with 5 of the 10 non-Open Skies EU member nations. (The United States does not have any relevant aviation agreements with Cyprus, Slovenia, Estonia, Latvia, or Lithuania.) We interviewed officials from these agencies to confirm that the information in these documents and reports were correct.

To determine the effect of Open Skies, we looked at the growth of transatlantic passenger and freight traffic, and we analyzed historical data on airline passenger and freight traffic. We used DOT's T-100 on-flight data to determine the total number of passengers and the total weight of freight and mail volumes that flew between the United States and the EU from 1990 to 2002. U.S. and foreign airlines are required to report all nonstop segments in which at least one point is in a U.S. state or territory.¹ To facilitate analysis of the T-100 data, we contracted with BACK Aviation Solutions (BACK), an aviation-consulting firm. BACK obtains the DOT data

¹14 C.F.R. Sec. 241 prescribes the collection of scheduled and nonscheduled service traffic data from the domestic and international operations of U.S. air carriers, while 14 C.F.R. Sec. 217 prescribes the collection of data from foreign air carriers. The schedules submitted by the air carriers to DOT under this requirement collect nonstop segment data and on-flight market information by equipment type and by service class. This report is known as the T-100 report.

and makes certain adjustments to these data, such as correcting recognized deficiencies in the airlines' data submissions, when these submissions have not met DOT's standard of 95-percent accuracy.

To determine the reliability of DOT's T-100 data and BACK's product, we (1) reviewed existing documentation from DOT and BACK about the data and the systems that produced them, (2) interviewed knowledgeable agency and company officials, and (3) performed electronic tests of the data. We concluded that the data were sufficiently reliable for the purposes of this report.

To determine the amount of nonstop or connecting service available between selected U.S.–EU markets,² we analyzed airline flight schedule information submitted to Innovata by U.S. and EU airlines for May 2004. Innovata, whose clients include all major North American airlines, maintains comprehensive airline schedule data files based on information they collect, verify, and aggregate from the airlines. We purchased and accessed Innovata data through Sabre's FlightBase airline scheduling software. To determine the reliability of the Innovata data and Sabre's product, we (1) reviewed existing documentation from Innovata and Sabre about the data and the systems that produced them, (2) interviewed knowledgeable company officials, and (3) performed electronic tests of the data. We concluded that the data were sufficiently reliable for the purposes of this report.

When analyzing the scheduled service in markets, we selected the largest U.S. and EU airports in terms of passenger traffic, based on airport categorization by the Federal Aviation Administration (FAA) and the Airports Council International.³ While this does not include all airports within the United States or EU, the U.S. airports selected accounted for 96.6 percent of the total U.S. passenger traffic in 2002, and EU airport officials stated the EU airports selected comprised the major European airports. We also used the May 2004 schedule data to examine the number

²In the airline industry, markets are generally defined in terms of service between a point of origin and a point of destination. Thus, a market is often, but not always, defined as a city pair.

³U.S. airports are defined at 49 USC 47102 as large hub airports, medium hub airports, and small hub airports. Airports Council International defines the largest EU airports as having more than 2 million passengers per month for Category 1 airports, between 1 million and 2 million boardings per month for Category 2 airports, and less than 1 million boardings per month for Category 3 airports.

of competitors within a given airline market. DOT has in the past defined a “competitor” as an airline or alliance that has a market share of at least 10 percent of available flights. As in prior reports on the effects of changes in competition of proposed mergers or alliances, we adopted that 10 percent threshold. To determine the number of competitors within each market, we identified the best level of service provided and the competitive alternative.⁴ For example, if a market has nonstop service, that would be considered the best level of service. However, one stop/single on-line connecting service may be a valid competitive alternative to nonstop in some markets (e.g., among the subset of passengers who are not time-sensitive or may be more sensitive to prices).⁵ Therefore, when the best level of service is nonstop, to determine the number of competitors, we counted all airlines that provided either nonstop service or one stop/on-line single connecting service. For markets where the best level of service is one stop/on-line single connecting service, we counted airlines that provided two stop/on-line double connecting service as additional competitors.

To determine what the key ways are that commercial aviation between the United States and EU could be changed by the Court of Justice decision, we interviewed officials from DOT, State, DG TREN, the European Union Directorate General for Competition (DG COMP), France, Germany, the Netherlands, and the United Kingdom, as well as from U.S. and EU airlines, EU airports, and EU aviation trade associations. We discussed the implications for European airlines of changes to the nationality clause in existing Open Skies agreements. We also discussed congested airport facility access and environmental regulations to better understand carrier access to EU airports. We reviewed reports recommended by aviation authorities from the European Commission, Germany, Britain and the Netherlands. Finally, we also discussed with EU officials the EU process for airline certification, establishment, and operations.

⁴Coding by best level of service meant that once a market was identified, it could not be recounted. For example, while the San Francisco to Frankfurt market has nonstop, single-connection and double-connection service, the market would be counted once as a nonstop market.

⁵For example, DOT’s approval of the United–Lufthansa antitrust agreement (docket number OST-1996-1116) states, “for a significant number of travelers in long-haul markets not constrained by strict time-sensitivity, one-stop and connecting service can provide a reasonable substitute for nonstop service and should be considered as a competitive option for purposes of antitrust analysis.”

To analyze the potential effect of removing the nationality clause restrictions on consumers and airlines, we interviewed officials from DOT, State, DG TREN, DG COMP, France, Germany, the Netherlands, and the United Kingdom, as well as from U.S. and EU airlines, U.S. and EU airports, and EU aviation trade associations. We also conducted a review of existing research and analyzed airport capacity and demand data from Airport Coordination Limited. These data contain the number of slots available at London's Heathrow airport and the demand for these slots by airlines. Based on logical tests for obvious errors of completeness and accuracy, we determined that the data were sufficiently reliable for our purposes. To analyze the potential labor effects, we interviewed officials from major U.S. and EU airlines, U.S. and EU labor unions, the EU Directorate General for Employment, labor research organizations, and U.S. and EU agencies.

We also conducted a review of existing research and analyzed data from DOT's "Form 41" database. This database contains financial information that large air carriers are required by regulation to submit to DOT (see 49 C.F.R. Sec. 241). Airlines submit financial data monthly, quarterly, semiannually, and annually to DOT with financial and operating statistics. To facilitate analysis of these data, we contracted with BACK, an aviation-consulting firm. BACK obtains the DOT data and makes any necessary adjustments to these data to improve their accuracy. To determine the reliability of DOT's Form 41 data and BACK, we (1) reviewed existing documentation from DOT and BACK about the data and the systems that produced them, (2) interviewed knowledgeable agency and company officials, and (3) performed electronic tests of the data. We concluded that the data were sufficiently reliable for the purposes of this report.

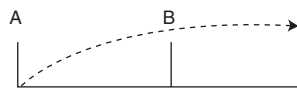
We also reviewed an industry survey of pilot contracts that included wages and benefits for pilots and pilots of different seniority levels, by airline. The Association of European Airlines (AEA) provided employment information for 15 member airlines. Based on interviews with knowledgeable AEA officials and logical tests for obvious errors of completeness and accuracy, we determined that the data were sufficiently reliable for our purposes.

We conducted our work from October 2003 through July 2004 in accordance with generally accepted government auditing standards.

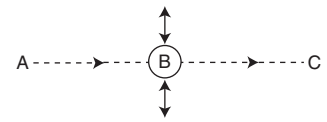
Air Freedoms

Currently, there are generally considered to be nine freedoms of the air. Although these operations are called "freedoms," they are not necessarily available to an airline. Most nations of the world exchange first and second freedoms through the International Air Services Transit Agreement. The other freedoms, to the extent that they are available, are usually exchanged between countries in bilateral or multilateral air services agreements. The eighth and ninth freedoms (cabotage) have been exchanged only in limited instances. (U.S. law currently prohibits cabotage operations.) In addition, airlines are often required to have an operating license to exercise the rights that are available.

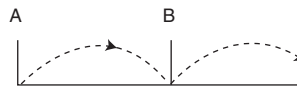
First Freedom - The right to fly across the territory of a foreign country without landing (e.g., United Airlines flies from the United States (A) over Ireland (B) en route to Germany).



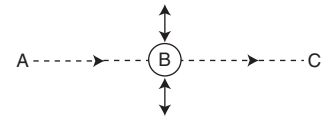
Fifth Freedom - The right to enplane traffic at one foreign point and deplane it in another foreign point as part of continuous operation also serving the airline's homeland (e.g., Northwest Airlines has "fifth freedom" rights to carry traffic between Tokyo (B) and Hong Kong (C), on services which stop at Tokyo (B) en route between Los Angeles (A) and Hong Kong (C)).



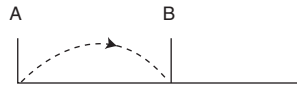
Second Freedom - The right to land in a foreign country for technical or nontraffic purposes, such as for refueling or maintenance (e.g., American Airlines flies from the United States (A) and lands to refuel in Ireland (B) en route to Germany).



Sixth Freedom - This term is applied to fifth freedom traffic carried from a point of origin in one foreign country to a point of destination in another foreign country via the home country of the airline (e.g., KLM carries sixth freedom traffic between New York (A) and Cairo (C), carrying passengers traveling from New York (A) to Amsterdam (B) and on to Cairo (C)).



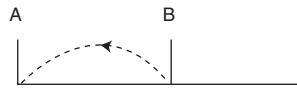
Third Freedom - The right to deplane traffic in a foreign country that was enplaned in the home country of the carrier (e.g., United Airlines carries passengers from the United States (A) to France (B)).



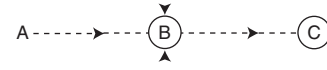
Seventh Freedom - This term is applied to an airline's operating turnaround service and carrying traffic between points in two foreign countries without serving its home country (e.g., Lufthansa operates between New York (A) and Mexico City (C) without serving Germany (B)).



Fourth Freedom - The right to enplane traffic in the foreign country that is bound for the home country of the carrier (e.g., American Airlines carries passengers from the United Kingdom (B) to the United States (A)).



Eighth Freedom - This term is used to refer to "consecutive or fill-up" cabotage in which an airline picks up traffic at one point in a foreign country and deplanes it at another point in that same foreign country as part of a service from the home country of the airline (e.g., Singapore Airlines enplanes traffic at Wellington (A) and deplanes it in Auckland (B) as part of its service between New Zealand and Singapore (C)).



Ninth Freedom - This term is used to refer to "pure" cabotage in which an airline of one country operates flights and carries traffic solely between two points in a foreign country (e.g., Air France operates flights between Berlin (A) and Frankfurt (B)).



Source: DOT.

Cargo Carriers

While U.S. cargo carriers have also benefited from the 15 Open Skies agreements the United States has signed with EU member nations, the European Court of Justice ruling also affects these carriers. Since 1990, U.S. cargo carriers have experienced a significant increase in volume and operations with the development of a large hub-and-spoke network. With a new agreement that extended the Open Skies framework, U.S. cargo carriers would also likely gain additional traffic rights into markets that are currently restricted. There are unique cargo carrier issues that are not directly linked to the nationality clause, however, and these issues do present concerns to U.S. cargo carriers. Because U.S. cargo carriers rely heavily on night operations, attempts by local communities in EU member states to impose additional restrictions on night flight operations could have an effect on U.S. cargo carriers.

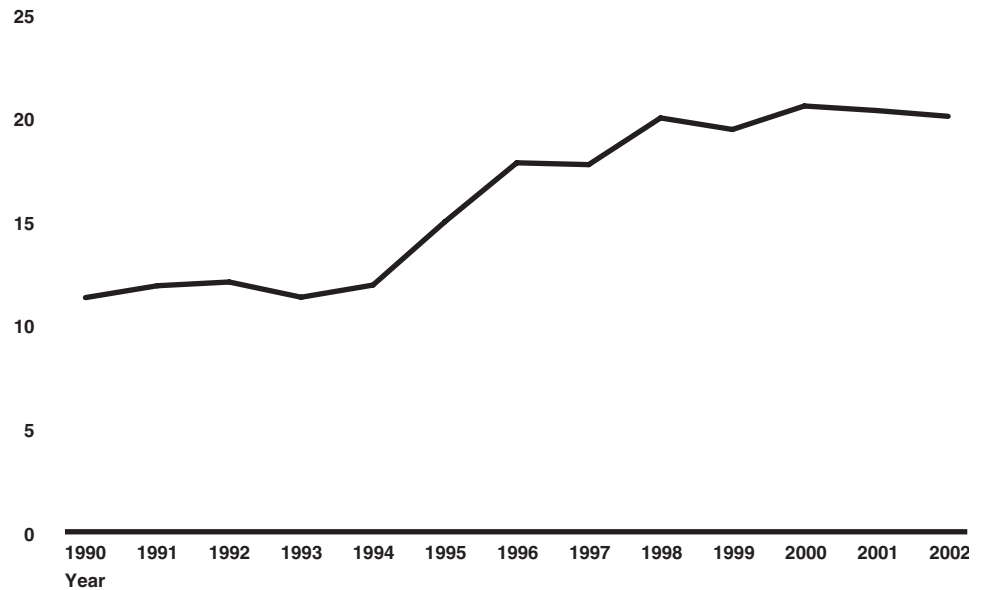
U.S. Cargo Carriers Have Increased Their North Atlantic Operations Since Open Skies

Similar to the increase in passenger service, cargo service also experienced a significant increase in volume and operations since the inception of Open Skies agreements. Freighter operations for all carriers flying between the United States and EU increased more than 75 percent from 1990 levels to over 20,000 flights in 2002 (see fig. 12).¹ Using “fifth freedom” rights provided by Open Skies, FedEx and United Parcel Service (UPS)—the largest U.S. all-cargo carriers—expanded operations through hub-and-spoke networks in Paris and Cologne. FedEx currently operates three daily flights from the United States to Paris, one to Frankfurt, and one to London (Stanstead Airport); UPS operates five daily flights from the United States into its European hubs (Cologne, Germany; East Midland, United Kingdom; and Paris, France). These increased freighter operations carried more than double the 1990 freight and mail volumes, so that by 2002 freighters carried over 2.5 billion pounds between the United States and the EU.

¹Freighters are airplanes that provide only cargo service.

Figure 10: Freighter Operations for All Carriers Flying between the United States and the EU, 1990-2002

U.S. - EU Freighter Ops (in thousands)



Source: GAO analysis of DOT data.

Fifth Freedom Rights

With the removal of the nationality clause restrictions, U.S. airlines would gain “fifth freedom rights” (i.e., the right to operate flights from the United States to an EU country and then beyond to another country) in EU member states with restrictive bilateral agreements. For example, under “fifth freedom rights,” FedEx is able to transport cargo from Memphis to Paris, deposit some or all of it in Paris, and then pick up new cargo and fly it to Frankfurt. While all U.S. cargo carriers have fifth freedom rights under current Open Skies agreements, under the more restrictive bilateral agreements, such as the agreement with the United Kingdom, these rights are limited.

UPS and FedEx make extensive use of fifth freedom rights in many of the EU countries where they have such rights. Under the Bermuda 2 agreement, when U.S. cargo carriers operate a flight from the United States that stops both in the United Kingdom and an airport in continental Europe, that flight is restricted from using some fifth freedom rights to pick up cargo in the United Kingdom and transport it on to the continental

destination. For example, FedEx schedules a daily flight from its hub in Newark to its hub in the United Kingdom, and this flight then continues on to Paris. Under the current agreement, FedEx is allowed to drop off cargo in the United Kingdom, but it is not allowed to pick up cargo in the United Kingdom and transport it to Paris. Instead, the plane must travel to France only partly loaded (that is, with the Paris-bound cargo that originated in the United States). Cargo that FedEx receives in the United Kingdom for shipment to Europe must be shipped using a separate charter service. This increases FedEx's operating costs. A new agreement would remove these restrictions and allow FedEx to utilize its network more efficiently.

Lack of EU Enforcement Ability on Noise Regulations May Affect U.S. Cargo Carriers

Increased restrictions on night flight operations could potentially adversely affect the ability of U.S. cargo carriers to operate. At a number of EU airports, local communities are seeking, for environmental reasons, to restrict the extent of night operations. At Frankfurt, for example, German officials are in the process of attempting to ban all nighttime operations at the Frankfurt airport and have cargo carriers move their operations to the Hahn airport—about 80 miles away. Restrictions on these nighttime operations would compromise U.S. cargo carriers' operations.

If cargo carriers need to limit their nighttime operations or move them to other locations, the impact on U.S. cargo carriers could be significant, since they have invested substantial financial resources to develop their distribution networks and airport facilities. For example, FedEx has invested over \$200 million to develop its operations at the Charles de Gaulle, Stansted, and Frankfurt airports. UPS also has invested significant sums in its facilities at Cologne, Germany. Therefore, changes in night flight regulations could effectively devalue these investments by reducing the ability of these companies to fully utilize their networks and facilities. In particular, if FedEx were forced to relocate its Frankfurt operations to Hahn, the value of its Frankfurt facilities would be diminished. FedEx officials indicated that if a night ban was enacted, it would limit them with regards to expanding future operations. In addition, if an airport restricted aircraft from landing after midnight, it would force U.S. cargo carriers to eliminate either late pickups or early deliveries. Both FedEx and UPS highlighted this as a huge competitive disadvantage.

The EU has little direct influence in local attempts to invoke such restrictions, as such actions remain a local- and country-specific matter. Although the EU issued a directive in 2002 on the establishment of rules and procedures with regard to noise-related operational restrictions at EU

airports, all actual regulations are established and implemented by the individual member states.² The EU directive supports the ICAO “balanced approach,” which outlines a standard set of procedures for establishing aircraft noise regulations.³ This approach and the EU directive attempt to harmonize the procedures used by individual member states. However, since the pressure to restrict night operations usually originates with local communities surrounding airports, local governments have enacted night flight restrictions in compliance with local citizen demands or local government regulations. Therefore, noise restrictions can greatly vary between member states. If aviation stakeholders feel that member states have not followed the procedures established under the ICAO “balanced approach,” they can appeal to the EU. If the EU rules in favor of the aviation stakeholder, the member state is required to amend the regulation. However, according to EU officials, under EU law, during the infringement proceedings, there is no requirement for the EU member states to stop or delay these noise regulations. Officials stated that, while the EU does not have any enforcement mechanisms and the infringement procedure is more of a political pressure tool, the EU treaty does provide for accelerated procedures once the procedure is placed on the Court of Justice agenda.

²Directive 2002/30/EC of the European Parliament and of the Council of 26 March 2002 on the establishment of rules and procedures with regard to the introduction of noise-related operating restrictions at Community airports.

³ICAO Resolution A33/7 introduced the concept of a “balanced approach” to noise management. The “balanced approach” concept of aircraft noise management is composed of four principal elements and requires careful assessment of all different options to mitigate noise, including reduction of airplane noise at the source, land-use planning and management measures, noise abatement operational procedures, and operating restrictions, without prejudice to relevant legal obligations, existing agreements, current laws, and established policies.

Current International Airline Alliances

Global alliance	Alliance airlines	Annual passengers (millions)	Number of cities served	Airlines with antitrust immunity	EU Open Skies countries
oneworld	Aer Lingus, American, British Airways, Cathay Pacific, Finnair, Iberia, LanChile, Qantas	218.4	573	American, Finnair	Finland
SkyTeam	Aero Mexico, Air France, Alitalia, CSA Czech Airlines, Delta, Korean Air	212	500	Delta, Air France, Alitalia, CSA Czech Airlines, Korean Air	France, Italy, Czech Republic
Northwest - KLM	Northwest, KLM	N/A	N/A	Northwest, KLM	Netherlands
Star	Air Canada, Air New Zealand, ANA, Asiana Airlines, Austrian, bmi, LOT Polish Airlines, Lufthansa, Mexicana, SAS, Singapore Airlines, Spanair, Thai Airlines, United, US Airways, Varig	360	680	United, Lufthansa, Austrian, SAS, Air Canada, Air New Zealand, Asiana	Germany, Denmark, Sweden, Austria

Source: U.S. Department of Transportation, U.S. Department of State, oneworld alliance, Star alliance, Northwest Airlines, and SkyTeam alliance.

Air France-KLM Merger

A major consolidation event—the recently approved Air France-KLM merger—is already occurring within the framework of existing Open Skies agreements. This merger involves two airlines owned and controlled by national citizens from countries that had both signed Open Skies agreements with the United States. It has been structured in such a way as to protect the traffic rights granted under bilateral agreement for each airline.¹ This meant that the merger needed to include a series of corporate governance and ownership adjustments not normally found in a traditional merger. For example, the actual merger includes a 3-year transitional shareholding structure that will ensure that majority ownership of Air France is with French citizens and that the majority ownership of KLM is under Dutch citizens. The basic structure attempts to preserve the brands and identity of each airline by establishing a French holding company, Air France-KLM, which will own 100 percent of the economic rights for both Air France and KLM.² To protect KLM's traffic rights, Air France-KLM will only control 49 percent of the voting rights, with 51 percent being held by Dutch foundations and the Dutch government. After 3 years, the Air France-KLM holding company will own 100 percent of both airlines. European officials believe that the EU's February 2004 approval of the Air France-KLM merger signals the start of consolidation of the European aviation industry. If a new U.S.-EU agreement eliminates the nationality clause restrictions, the need to structure mergers to protect traffic rights across the north Atlantic will likely be eliminated.

Mergers among major European airlines will inevitably raise questions about how existing global alliances will be affected. Because of the alliance with U.S. partners, mergers will exert effects on U.S. airlines and consumers. Air France and KLM are in separate alliances with different major U.S. airlines (Delta and Northwest, respectively), and DOT has granted antitrust immunity to both of these alliances. In addition, Delta, Northwest, and Continental agreed to a major domestic code-sharing partnership in 2002, which was permitted with certain conditions by DOT.

¹The Dutch government has an option allowing it to obtain 50.1 percent of KLM's voting rights if its traffic rights are challenged as a consequence of the nationality of KLM's shareholders.

²Economic rights are defined as the right to collect dividends.

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