Executive Summary

This report updates a 1991 Transportation Research Board (TRB) report, *Winds of Change: Domestic Air Transport Since Deregulation.* The committee that authored *Winds of Change* endorsed deregulation. Consumers clearly had benefited from lower prices and new airline services during the 1980s, the first full decade after deregulation. More city-pair markets had three or more competitors at the end of the decade than at the beginning. Carriers had become more cost conscious and industry productivity was improving.

All of this was achieved even though many avenues for competitive entry had not been fully opened nor exploited. Important vestiges of regulation had continued, such as administrative limits on the use of some key airports and preexisting financial and contractual agreements between airport operators and established airlines. These holdover policies and practices gave the incumbent carriers advantages that helped offset the lower operating costs that some newer airlines might have enjoyed. Other post-deregulation developments favoring the incumbent carriers included the proliferation of frequent-flier programs—enticing travelers, particularly business travelers, to the services of a single carrier—as well as new ways for airlines to influence travel agents, such as offering extra commissions, known as overrides, for steering business their way.

Partly for these reasons, few new carriers survived the decade following deregulation. Competition also diminished in some markets because of the U.S. Department of Transportation's (DOT's) acceptance of most airline mergers, including several involving direct rivals. Although the *Winds of Change* committee gave the deregulated industry generally positive marks, it expressed concern that with further concentration, too few airlines would survive to ensure the competition needed to preserve the gains of deregulation.

The *Winds of Change* committee therefore urged several actions to encourage and safeguard competition:

- More vigilant reviews of mergers, particularly of airlines with overlapping service areas;
- New rules to reduce the influence of airlines on travel agents, removing the contractual limitations on the use of competing computer reservation systems (CRSs); and
- Requirements that agents disclose to consumers any commission overrides and other booking incentives from individual carriers.

The committee did not recommend further actions to overcome all possible impediments to competition and indications of unchecked market power, recognizing that some of the developments that gave incumbents a comparative advantage—such as hub-and-spoke operations, frequent-flier programs, and CRSs—also bestowed benefits on consumers. Furthermore, the airline industry's return on invested capital, both before and after deregulation, had been scant, suggesting limited market power generally and raising serious concerns about the industry's ability to finance itself over the long term.

This study committee did not address the question of whether airline deregulation was sound national policy, as concluded in *Winds of Change* and in many other studies of the industry. Its emphasis is on preserving and enhancing the gains made since deregulation, primarily by changing public policy to foster more widespread and vigorous airline competition.

UPDATE OF COMPETITION ISSUES

Several early outcomes and features of deregulation reported in *Winds of Change* have carried over into the current decade. Trends in overall flight offerings, passenger traffic, and prices are evidence that consumers continue to benefit. Scheduled departures have risen by nearly 20 percent since 1990, and the number of air travelers has grown by more than one-third. Adjusted for inflation, average fares fell by about 25 percent from 1990 to 1998, at about the same pace as the real decline in jet fuel and other airline costs—cost reductions that have stemmed in part from the competitive pressures ushered in by deregulation. Competition continues to be particularly strong in medium- to long-haul markets, as airlines offer frequent flights through their hubs to an array of destinations. Because of hub-and-spoke systems, travelers in such markets enjoy many airline choices as well as flight options, although transfers at hub airports are the norm.

Certain characteristics of the industry, however, continue to raise concern. Travelers in many cities with major hub airports continue to have few airlines to choose from when flying in short-haul, nonstop markets, or their "spokes." As a consequence, hubbing carriers often account for 50 percent or more of the local passenger traffic in hub cities. Public discontent over airlines charging higher prices for unrestricted tickets—usually for purchases by time-sensitive business travelers—is most pronounced in these hub cities and other markets in which short-haul service is dominated by one or two carriers. Many new, low-fare carriers have entered such markets, often eliciting sharp price-cutting and other aggressive responses by incumbents, which the new entrants have protested as unfair. Another relatively recent development is that major airlines have formed partnerships to share frequent-flier programs and to coordinate flight schedules, fares, and services through codesharing. Although potential benefits and costs are associated with these developments, the outcome remains unclear and worrisome.

Airline Pricing Practices

Over the past decade, public dissatisfaction with airline ticketing practices has grown—particularly because of the many restrictions on lower-priced tickets and increases in the price of unrestricted tickets. Advance purchase requirements, weekend stay-over rules, penalties for changing reservations, and various other booking restrictions are aimed largely at distinguishing price-sensitive from time-sensitive travelers. The lowest fares usually are paid by travelers who are less concerned about schedules, are unlikely to cancel or modify their travel plans, and are more willing to fly during off-peak periods and to use uncongested, but typically more remote, airports in return for cheaper fares. The highest fares usually are paid by travelers who prefer unrestricted tickets that allow last-minute changes and who desire frequent and conveniently scheduled flights. These passengers, who tend to be least sensitive to price, are often referred to as price-inelastic, or nondiscretionary, travelers.

The higher fares paid by nondiscretionary travelers—usually business travelers—are a reflection in part of the higher costs associated with providing last-minute service and flights during peak travel periods. More generally, the unrestricted fares have helped large airlines to cover both the operating and capital costs of maintaining networks that provide the frequent and convenient service desired by time-sensitive travelers and to earn the long-term profits necessary to attract capital and sustain these networks. At the same time, fare restrictions have allowed airlines to fill seats by offering leisure travelers lower fares that at least cover the incremental, or marginal, cost of the service.

The public's discontent with the many restrictions imposed on lower-priced tickets and with the sharply higher prices charged for unrestricted tickets reflects in part a misunderstanding of the role of fare differences in allowing airlines to provide the kind of service desired by time-sensitive travelers. Yet it also might reflect a sense that the higher fares charged to nondiscretionary travelers in some markets exceed the cost of efficiently providing schedule-intensive service and are to some extent indicative of market power achieved partly through limits on competitive entry and possibly by the threat of predatory response.

The spread between the lowest and highest fares has widened during the 1990s. In 1992, for instance, travelers paid about two times the median ticket price for the highest fares (in this case, the 90th percentile); but in 1998, they paid nearly three times the median. Some of this increase in fare dispersion might be attributable to cyclical effects, possibly due to disproportionately expanded demand by business travelers and to higher use of aircraft and seating capacity. Under these conditions, airlines take risks in not selling some seats in anticipation of late-booking travelers or last-minute itinerary changes, since these seats—which might otherwise have sold at lower fares earlier—might fly unsold. The highest fares, which are increasing the spread, might reflect these costs. New, low-fare carriers, which have reduced fares in many markets, likely have contributed to an overall increase in the spread between the lowest and highest airline fares. To some observers, however, the widening spread in fares reflects the increasing ability of airlines to segment price-inelastic travelers, and to charge them exceptionally high fares in markets where pricing is not adequately disciplined by competition.

Emergence of Airline Alliances and Other Partnerships

Several major U.S. carriers recently have formed partnerships. Most of these involve sharing frequent-flier programs, although some also coordinate flights in connecting markets through codesharing. While only one domestic alliance so far has involved financial integration, it is reasonable to worry that domestic airlines in looser marketing relationships will be less inclined to compete vigorously with one another. The possibility that these relationships will strengthen and migrate toward mergers—de facto, if not de jure—also raises concern.

Even more alarming to some is the proliferation of alliances between U.S. and international carriers, often facilitated by grants of antitrust immunity to coordinate fares, seating capacity, schedules, and marketing. Although some travelers in connecting markets might benefit from these alliances, the potential gains to travelers in mainline markets—gateway-to-gateway routes where allied airlines were once main competitors—are not evident, and it is possible that these travelers are losing out. Moreover, the longer-term effects of these alliances may be exclusionary, ultimately forcing some unaffiliated U.S. airlines out of international markets by diverting their feed traffic and weakening their overall route structure to the detriment of domestic competition. An issue that deserves explicit attention is whether these expanding alliances are compatible with longer-range international aviation goals, such as unrestricted entry and competition by the most efficient carriers on a multilateral or global basis.

Resurgence in Low-Fare Entry and Concerns About Unfair Competition

About one in five passenger trips today is on an airline that can be characterized as primarily a “low fare” operator. Southwest Airlines alone accounts for about two-thirds of these travelers, and has played an important role in the industrywide decline in average fares since deregulation, not only because of its own low prices but because it has spurred lower prices by other airlines, even compelling some to create special low-fare divisions.

Other low-fare startup airlines have had mixed success. Undercapitalization, poor choices of markets, inexperienced management, and unexpectedly vigorous competitive responses have contributed to some failures. Increased market demand during the decade has raised the cost of aircraft and labor, possibly inhibiting entry and expansion by new airlines that want to pursue a low-cost, low-fare strategy. Concerns about the safety of startup airlines—particularly after the 1996 crash of a ValuJet flight—also might have slowed expansion during the latter half of the 1990s. Nevertheless, nonincumbent airlines, led by Southwest, have entered nearly 2,000 markets (nonstop segments) during the past six years, and net market entries—that is, entries minus exits—have been positive on balance, exceeding 500.

Market exits and failures among new airlines are not necessarily a cause for alarm, since a high rate of failure by new businesses characterizes many—if not most—industries. But in addition to facing the normal difficulties of running a new business, as well as the longstanding impediments to entry described earlier, new airlines also have encountered aggressive responses by incumbents. DOT has expressed concern that these responses sometimes have strayed beyond the bounds of fair competition, aiming instead at improperly excluding competitors. It therefore has proposed a method for detecting and for enforcing prohibitions against unfair, exclusionary conduct in the industry (Appendix A).

UNFAIR COMPETITION AND DOT's ENFORCEMENT PROPOSAL

DOT forwarded to the study committee 32 complaints of unfair competitive conduct, filed by new entrants between 1993 and 1999. The committee did not review each in detail; however, it is apparent that some of the actions described are difficult to reconcile with fair and efficient competition. About one-third reported chronic difficulties obtaining gates and other facilities at airports dominated by incumbents. About half involved sharp price cutting and increases in capacity by incumbents in response to entry. Some complained of incumbents offering higher travel agent commissions and bonus frequent-flier miles in contested markets, allegedly to divert enough potential customers to make the new service unprofitable. Among the most troubling, in the committee's opinion, were four reports of incumbents not only sharply lowering fares but also temporarily scheduling many more flights, some in city-pair markets in which they previously had not offered nonstop service nor jet flights.

Sharp reductions in price and increases in capacity are predatory if designed to drive out or suppress competition to gain higher future prices and profits through increased market power. Some economists have postulated that firms employ predatory tactics not only to strengthen or preserve their monopoly position in the markets in which they cut prices, but also to deter competitive entry in their other markets. Therefore, a valid concern is that airlines might engage in predation, even on a limited basis, with the broader aim of dissuading entry and increasing market power throughout their networks.

Distinguishing predatory behavior from the kind of competition that benefits consumers and then proving the distinction empirically, however, are difficult—particularly in the airline industry with its frequent fare wars and constant shifts in city-pair service. A common test presumes that predation occurs when a firm charges prices that are below marginal costs, so that incremental revenues generated from the sale of one more unit are less than the incremental costs incurred making the sale. Determining the applicable marginal cost of providing an airline passenger trip, however, is not easy. Airlines can enter and exit markets without incurring large, unrecoverable costs, because their assets are mobile, and they can lease aircraft, airport gates, and terminal space, as well as contract for ground services. Under these circumstances, even short-run average variable costs—an accounting measure often used as a practical substitute for marginal cost—can be difficult to quantify retrospectively and at the applicable unit level.

The distinctive characteristics and practices of the industry also have effects on the likelihood of successful predation and therefore on the probability of airlines employing predatory tactics. On the one hand, the relative ease of competitive entry or reentry can limit the ability of a predator to hold onto the monopoly position and recover the losses incurred from predation. On the other hand, the fluidity of airline assets and the consequent ability of incumbent carriers, when challenged by price-cutting rivals, to add and withdraw capacity quickly, can facilitate predation when there are significant barriers to competitive entry.

In proposing an enforcement plan, DOT warned that it would investigate instances in which an incumbent airline, challenged by a new entrant, had responded by lowering fares and increasing seating capacity so that total revenue generated in the market is lower than would have been likely with a more "reasonable alternative response." According to DOT, a reasonable response would be for the incumbent to match the low-fare offerings of the new competitor on a restricted basis, without sharply increasing seating capacity. Apparently, DOT regards the revenue that the incumbent sacrifices by shifting capacity as an opportunity cost of predation.

Opportunity cost—that is, the value of the best alternative response that is forgone—is relevant for assessing the costs of suspected predatory activity. However, DOT's proposal for detecting predatory behavior raises valid concerns about administrative feasibility and about the potential for undesirable consequences. Defining and specifying a class of new entrants for protection risks arbitrary enforcement, possibly favoring inefficient carriers. DOT's proposed criteria for detecting possible predation, which would require a comparison of revenues actually earned by the incumbent with hypothetical revenues from other possible responses, are inherently speculative and therefore likely to be difficult to administer.

In general, industry-specific administrative agencies are prone to rely on prescriptive regulation rather than on market forces to achieve their goals; in particular, they sometimes seek to protect their constituencies from competition perceived as destructive or predatory. There is a risk, therefore, that DOT's efforts will become increasingly regulatory and tend to inhibit, or even prohibit, some legitimate competitive responses. Moreover, policy and program objectives can change over time. Twenty years after economic deregulation, political influences on the provision and regulation of air transportation remain strong. Other experiences recounted in this report—the 30-year history of federal limits on access to some key airports or the recent antitrust immunity extended to international airline alliances—suggest that the potential for unintended policy outcomes should not be underestimated.

Because of these risks, a case can be made that federal assessments of anticompetitive conduct should be entrusted primarily to the Department of Justice (DOJ), which has a clear mandate—as well as the resources and expertise—to enforce the nation's antitrust laws. DOJ also can levy significant penalties through the criminal and civil courts. The committee recognizes that DOJ has been actively exploring how antitrust laws apply to predation in the airline industry and has been developing approaches that take into account the industry's characteristics. In the committee's opinion, DOJ's involvement in this area is a healthy development.

The committee also believes, however, that DOT has an important role in preserving and enhancing opportunities for competitive entry in the airline industry. This must entail concerted action—as recommended in this and other reports—to remove the persisting impediments to entry that are under DOT's authority. In addition, DOT should ensure that airlines are not exploiting their advantageous relationships with airports, air traffic control access, CRSs, and travel agents to hinder competition and to limit entry opportunities.

The committee harbors reservations, however, about DOT's proposal for identifying and forbidding predation in the airline industry. Many members are concerned that DOT's proposal could become increasingly regulatory, thus inhibiting genuine competition, and they worry that it designates certain classes of carriers for special consideration. All committee members believe more work is necessary to develop meaningful tests for detecting and proving predation—tests that facilitate enforcement and compliance but that also protect the competitive process rather than specific competitors.

For these reasons, some members of the study committee would prefer that DOJ—which is unencumbered by industry regulatory responsibility and has greater antitrust expertise—take the lead in enforcement, as it did in a recent action against a major carrier. However, other members—while sharing the committee's general concerns about regulatory risks—judge the problem serious enough to warrant the more active involvement of DOT, exercising its own independent enforcement authority to prevent unfair methods of competition. While these committee members are uncertain about the administrative feasibility of DOT's proposed guidelines, they believe DOT should be given the opportunity to develop and apply objective tests for predation, ensuring that markups on unrestricted fares are subject to a competitive discipline devoid of exclusionary practices. They are optimistic that DOT can do this without becoming overly regulatory and without inhibiting the kind of competitive price cutting that provides lasting fare reductions.

In short, the committee believes DOT's proposal as currently formulated has flaws. Committee members differ, however, on the seriousness of the flaws and whether the flaws can be resolved by DOT.

Despite differences on these issues, committee members are unanimous in believing that DOT's main focus should be on expanding opportunities for more entry and competition. Freedom of entry, including freedom from the threat of anticompetitive behavior, is made possible in large part by the removal of barriers to competitive entry and reentry; this is the best antidote to excessive fares stemming from too much market power. Expanding capacity and ensuring efficient use of the nation's airports and airways is critical for this. Ensuring that structural developments within the industry, both domestically and internationally, are favorable to more competition is also important. The following recommendations emphasize these goals.

RECOMMENDATIONS

The purpose of this study has been to examine the state of airline competition and to offer recommendations for furthering and safeguarding it. The main reason for caring about the competitive process is that vigorous rivalry promises consumers more product and service choices at lower prices and with better quality. However, in addition to consumer interests, public policy must take into account many other considerations that could not be examined in this study. The committee's recommendations therefore must be understood as limited to the goal of preserving and fostering competition in the airline industry. To the extent that these recommendations raise additional considerations, integrating and reconciling them with the goals of competition must be left to others.

System Capacity and Opportunities for Competition

Congestion and delays caused by the inefficient provision of airway and airport capacity affect not only the on-time performance of airlines, but also the routes airlines choose to fly, how they schedule and design their networks, and the types of equipment they use. Capacity shortages that persist, unresponsive to increasing demand, can limit new competition, particularly entry and expansion by low-cost carriers. To compensate for shortcomings in the way airport and airway capacity are provided—and in the absence of proper pricing—many administrative limits have been imposed. These include regulatory controls on airline use of some of the nation's most important airports; air traffic control procedures that require queuing for access to navigable airways and airports; and federal restrictions on the ability of airports to raise and invest funds for expansion. Not only have these inefficient allocation mechanisms adversely affected competition, but they have permitted the deferral or neglect of more efficient and direct means of supplying needed infrastructure.

These regulatory controls are poor models for meeting future demands on the system. The sooner they are replaced and reformed, the sooner steps can be taken to provide airport and airway capacity more effectively and with fewer negative side effects. This also would allow for more direct pricing and for specific solutions to noise, congestion, and other problems that these administrative schemes address only indirectly. Although the committee recognizes the existence of many practical difficulties associated with the introduction of new allocation methods—and the uncertainties that arise—it believes the following actions should begin as soon as possible:

- **Apply federal and other funds to expand airport and airway capacity, particularly by investing in capacity-enhancing technology. The goal should be to use pricing both to finance expansion and to allocate capacity more efficiently. Both technology and pricing should be employed to encourage additional flights to and from underused secondary airports in major metropolitan areas.**
- **Introduce pricing methods in place of administrative restrictions to manage airline access to some of the country's major airports. The emphasis should be on the early substitution of pricing for current slot controls and perimeter limits on long-haul flights, with the goal of allocating scarce airport and airway space more efficiently and fairly among competing airlines and taking into account other technical and operational factors.**

- **Ensure that federal rules governing airport funding and spending do not conflict with—but instead help to achieve—the goal of increasing the availability of gates and needed infrastructure at major airports.**

These steps should allow more airlines to serve critical markets, encourage more competition in cities with dominated hubs, and increase industry entry and competition in general.

In this same spirit of increasing competition, **the committee urges an end to federal limits on foreigners owning and operating U.S.-based airlines**. The main rationale for restrictions on foreign ownership and investment is that other nations have them. Yet the main consequence is to limit the flow of capital and expertise into the domestic airline industry, possibly denying U.S. travelers the opportunity for more competitive services. Reluctance to ending such restrictions unilaterally is understandable, because the restrictions are enmeshed in international trade strategies aimed at prompting other countries to end their limits on foreign entry and trade. While the committee was not able to weigh the importance of these other factors, it believes this change in policy would benefit U.S. consumers on balance, even if other countries retain their more restrictive policies to the potential detriment of their own citizens.

Airline Alliances and Partnerships

In overseeing domestic airline alliances, DOT has authority to limit domestic codesharing and to impose conditions on other partnerships. The committee worries that codesharing and other collaborative arrangements among major domestic carriers will facilitate undesirable consolidation among current or potential rivals. To ensure an early and thorough evaluation of the effects of partnerships on competition, **the committee recommends that all collaboration plans among major U.S. airlines be subject to traditional, economic-based merger analyses by DOJ, and that these plans—even if they do not involve exchanges of equity or transfers of assets—be subject to advance notification requirements similar to those in the Hart-Scott-Rodino process.** (This process requires advance notification of certain acquisitions of stock and other assets).

In the case of international aviation agreements, the committee recognizes the complexities involved in opening markets governed by restrictive, bilateral aviation treaties. Relaxing bilateral restrictions is important; however, granting antitrust immunity to a few U.S. and foreign carriers engaged in global alliances might prove too high a price. Although they might benefit some travelers in the near term, the long-term exclusionary effects of the alliances might do more harm than good, by reducing rivalry in mainline international routes and by making it more difficult for unaffiliated carriers to compete. To ensure a critical review of these potential effects, **the committee recommends a two-part process for reviewing and approving applications for antitrust immunity by international airline alliances. DOJ should perform the initial review and then forward to DOT only those applications acceptable on competitive considerations. DOT should review these applications with respect to other issues of public interest and international policy. In addition, DOJ should perform follow-up critiques of immunized alliances approaching renewal.**

With its focused, procompetitive mission, DOJ is more likely than DOT to execute a thorough scrutiny of the competitive effects of antitrust immunity. DOT's role, on the other hand, is better suited to examining the broader and prospective effects of alliances on consumers and the industry over the long term. DOT would be more effective in this charge if it did not have to defend a position on specific alliances and requests for immunity.

Airline Ticket Distribution System

Travel agents—and the CRSs they use—provide an important service to consumers by making information available about the fare and service offerings of competing airlines. They also offer small airlines and new entrants access to a national network for marketing their services and distributing their tickets. Continued improvements to this system and the advent of new means of ticket distribution by airlines and agents—including Internet options—should be encouraged, since the potential gains from advances in distribution are so large. Nevertheless, ensuring and instilling impartiality in the system, however it evolves, should remain a priority for DOT.

DOT should monitor and investigate airlines' aggressive and selective use of travel agent incentives—as well as disincentives—to divert customers away from rival carriers. Consideration also should be given to developing rules for CRS listings to limit the kinds of code-shared flights posted and to avoid conferring unfair competitive advantages.

SUMMARY

This study focuses on some well understood and recognized opportunities to encourage airline competition, especially in larger markets. Many smaller airline markets, however, are potentially promising—and needy—candidates for increased entry and competition, particularly by carriers offering new nonstop jet service. Some suggestions and ideas for further exploration are offered at the end of this report to foster more competitive services in these markets, which could serve as points of entry into the industry. Indeed, encouraging and providing opportunities for communities to attract and retain airline services is both sensible and timely, as smaller, regional jets are being introduced. This is a case in which government actions might be appropriate to promote new airline competition.

In general, the committee strongly and unanimously urges positive steps that would encourage entry and competition in the entire industry. More emphasis should be placed on providing infrastructure capacity responsively and efficiently, without impeding legitimate competition. This approach must be accompanied by vigilant oversight of airline marketing and ticket distribution, making certain they are fundamentally fair and do not predispose the industry to further unhealthy consolidation. Some committee members are uncertain, and others are skeptical, about the prospects of using administrative procedures such as those proposed by DOT to police airline predation. All believe, however, that DOT's basic aim of preserving and expanding opportunities for competition should remain the principal goal of aviation economic policy.