

Discussion Panel Report

DOMESTIC AIR CARRIERS

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Introduction

Forecasts of domestic air travel growth are the product of myriad assumptions relating to the structure of the marketplace, the direction of public policy, and the state of the national economy. Some variables instrumental to such forecasts, including available seat-miles (ASMs) and average aircraft size, generally move in relatively consistent patterns; others, such as fuel prices and the gross national product, tend to defy accurate prediction more than a year or two in advance. Integrating these many factors into a single forecast requires both reliable data and recognition of the probable sources of error.

A panel of academics, consultants, industry managers, and government officials evaluated the many economic, technological, and policy issues poised to affect the expansion and performance of domestic air travel over the next five years. The group also considered the implicit and explicit assumptions behind FAA forecasts and offered an analytical assessment of these projections.

On the whole, the panel found the FAA's forecasts to be consistent with prevailing opinions in the aviation field as well as with widely circulated research on air transportation. Although the panel was somewhat more bullish about the probable growth in passenger enplanements and rises in load factors than the FAA, these differences to a large extent reflected contrasting assumptions about the probable state of the macroeconomy rather than diverging views about the character of the air travel marketplace.

Market Structure Considerations

The panel does not anticipate dramatic industry consolida-

tion in the form of merger or buyout activity over the next five years. Nevertheless, it concurs with the widely held prevailing view that international alliances are poised to profoundly affect nearly all aspects of market performance. These changes will likely come in the form of equity and code sharing, coordinated decision making, and the integration of certain maintenance and marketing activities within these alliances.

The panel believes that established major carriers, with the probable exception of Southwest Airlines, will ultimately assimilate themselves into three or four major alliances. Two of these alliances, Star Alliance (dominated by United and Lufthansa) and the One World Alliance (dominated by American and British Airways), have already established formal marketing identities. The others remain more embryonic in form but appear to be evolving from the Northwest-Continental-KLM-Alitalia partnership and the Delta-Air France-Aero Mexico partnership. While these alliances at present have relatively little impact on domestic market share, their tightening grip on the marketing decisions of both large and small carriers may result in a form of de facto consolidation, which could affect both prices and capacity decisions.

Among the most notable developments from alliances anticipated by the panel are renewed calls for fewer restrictions on foreign ownership of U.S. airlines, which may prove especially significant for "second tier" domestic carriers such as TWA and US Airways. Another likely outcome will be political pressure to allow cabotage, which would give foreign carriers the opportunity to serve markets within the continental United States. Such liberalization may be inevitable as the government continues its push for open skies agreements around the globe, prompting for-

eign carriers to seek expansion opportunities in the United States in return.

Against the backdrop of these alliances, the panel expects the domestic marketplace to experience an expanding competitive fringe—that segment of the market occupied by start-up airlines as well as established low-cost carriers such as Southwest. Concern about the precarious financial condition of start-up carriers appears to have lessened substantially since the last FAA-TRB workshop two years ago, partially because of the resilience of the U.S. economy. An infusion of venture capital—an occurrence little expected among industry observers during the middle 1990s—is enhancing the ability of start-up carriers to acquire new aircraft and expand their presence in markets previously dominated by major carriers. It is also facilitating the expansion efforts of nascent operators such as National Airways and JetBlue.

Although the growth of Airtran, Frontier, Spirit, Vanguard, and other start-ups will likely be affected by worsening capacity shortages at major airports, most notably at Boston Logan, Chicago O'Hare, New York LaGuardia, and Washington National, these carriers will continue to take advantage of air travelers' demonstrated willingness to travel secondary airports around such cities. The panel believes that industry analysts have tended to underestimate the significance of this practice in the past and that it will likely continue—if not accelerate—in the years ahead. The recent expansion of Southwest Airlines in Islip, NY, and Manchester, NH, and the exponential growth of Chicago's Midway Airport exemplify how once-underutilized airports can mitigate regional capacity shortages.

The panel anticipates that federal policy will affect industry yields only modestly (or perhaps not at all), despite continuing discussion about federal guidelines to establish a clearer definition for predatory pricing. Nevertheless, the group considers it noteworthy that the U.S. Department of Transportation (DOT) appears prepared to continue awarding slots to start-up carriers at critical airports as these slots become available. There is also growing pressure on Congress to begin a gradual phase-out of the High Density Rule limiting the number of takeoffs and landings at O'Hare, National, and LaGuardia.

Passenger Yield

Perhaps the most important implication of the continued expansion of start-up airlines is the downward pressure it places on passenger yields. Nevertheless, the panel projects a slightly more moderate decline in yield than those reflected in the FAA forecasts. It anticipates a decline in yield of 1.7 percent during the current year—a drop marginally less than the FAA estimate of 2.2 percent (Table 1). During 2000–2001, the panel expects a yield decline of 1.8 percent, an amount similarly below the FAA estimate. Overall, between 1999 and 2004, however, the panel anticipates a

decline of 1.6 percent, a decline more precipitous than those forecast by the FAA.

Among the factors most responsible for the disparity between the FAA and panel numbers are concerns about the potential effects of a substantial rise in the price of jet fuel and differing assumptions about the state of the macroeconomy. Still, panelists agreed with the assertion that the dynamism of the marketplace would continue to place downward pressure on yield well into the new millennium.

The panel warns that passenger yield will become an increasingly misleading measure of the price of air travel in the years ahead. Yield estimates do not encompass many sources of revenue, such as those generated through "affinity" relationships with credit card companies, hotel companies, and other partners in frequent flyer programs, revenues that appear to be growing as a proportion of total revenues. To an increasing extent, yield numbers understate the carrier's actual revenue from flight operations.

Another concern about the relevance of yield estimates relates to the industry's growing ability to liquidate excess capacity at sharply discounted prices only a few days (or hours) before a flight's departure—a process facilitated by the Internet and other forms of electronic marketing. The evidence remains unclear as to whether this represents predominately new traffic or whether it constitutes merely a change in the way in which existing passengers (especially those who are highly sensitive to price) are buying seats. Still another complicating factor is the proliferation of regional jets, which tend to increase yield by providing nonstop service that is attractive to business flyers at a relatively high cost per seat-mile flown. Unlike most other markets, therefore, routes served by regional jets are likely to see substantial increases in both the number of passengers and the average fare.

Finally, yield numbers fail to provide information about the growing dispersion of fares in the domestic market. As shown in Figure 1, there is substantially more variation in the prices paid by travelers in markets with high average fares (those with average fares to \$200 or more) than in those with low average fares (those with average fares of \$60 or less). (Figure 1 limits its sample to citypairs with travel distances to 250 miles or less.) The tighter distribution of prices in low-fare markets reflects the simplified fare structures of low-fare airlines, which tend to equalize the prices paid by various segments of the market.

Load Factors

The unprecedented rise in passenger load factors during the late 1990s has profound implications for the performance of the domestic air system. During 1998, domestic load factors exceeded 70 percent for the first time in commercial aviation history. During 1999, they remain near this historic level, despite a relatively sharp rise in industry capacity. The comparatively crowded conditions that exist on

aircraft in today's marketplace may well be largely responsible for prevailing consumer perceptions that air travel is diminishing in quality—concerns leading to congressional calls for a "Passenger Bill of Rights," which may drive up industry costs.

The panel identified two industry developments (in addition to the strength of the U.S. economy) as essential to understanding the rise in load factors. First, carriers are demonstrating a greater willingness and ability to adjust their capacity sharply in response to evolving competitive issues as well as shifts in demand. Many carriers are offering high-frequency service on long-haul routes with smaller aircraft. A notable example of this is the Chicago–Los Angeles market, where United Airlines currently operates 18 trips in each direction on certain days, including nearly simultaneous departures of Boeing 737s during the peak period. Similarly, the introduction of regional jets on routes historically served by larger equipment is helping carriers more closely align capacity to market demand.

The second factor responsible for rising load factors is more speculative. As previously stated, carriers are becoming more adept at disposing of their empty seats through Internet sites and other marketing arrangements. The recent flurry of media attention to web pages selling weekend excursion tickets at dramatic discounts and the emergence of entities such as Priceline.com (a vendor that allows customers to "name their own price") illustrate the significance of these new forms of distribution.

After considering the effects of these and other market forces, the panel expects a perceptible rise in load factors over the next several years. In this respect, the panel's assessment differs notably from FAA's, which anticipates a modest decline in load factors until they stabilize at about 69.2 percent. Although the panel projected that industry load factors would fall 0.2 point during the current year, it anticipates a rise of about 1.0 point during 2000. Further into the future, between 2001 and 2004, the panel anticipates load factors in excess of 71 percent. It should be noted, however, that some of the disparity between the panel and the FAA numbers reflects the agency's practice of

making forecasts in accordance with the Office of Management and Budget's macroeconomic projections, which call for a significant slowdown in the rate of economic growth during 2000 and 2001.

Adding to the uncertainty in load factor forecasts are initiatives, such as the one under way at United Airlines, to reduce the number of seats in the front section of the coach cabin to accommodate full-fare passengers. Whether this development, as well as the expansion of business class, will ultimately prove significant to load factors remains to be seen.

Average Aircraft Size

Major carriers over the past several years have steadily reduced the average size of their domestic fleets, as measured by the number of seats per airplane. This trend is partially attributable to the redeployment of widebody aircraft (most notably the DC-10 and Boeing 747) to international routes and the expanding proportion of smaller planes, such as regional jets and Boeing 737s. This trend is heralded by DOT estimates showing that the average number of seats per plane declined from 151.7 to 142.2 between 1990 and 1998. Such a dramatic decline occurred despite a substantial rise in the average length of passenger trips, which grew from roughly 730 miles to more than 800 miles over the period. During the early years of deregulation, the industry responded to longer stage lengths by moving toward larger aircraft sizes. During the 1990s, however, this has not been the case.

The panel urged forecasters to recognize the limitations of the data used to measure average aircraft size. The most significant problem is attributable to the inclusion of certain regional carriers in the calculations, thus leading to overstatements of the extent to which fleet sizes have declined. (This data problem has recently been to a large extent corrected.) Another concern is that the distinction between major airlines and their regional partners is becoming blurred as equity-sharing arrangements, code-sharing, and regional jets proliferate.

TABLE 1 COMPARISON OF FORECASTS: DOMESTIC AIR TRAVEL

| | Actual | | Predicted | | | | |
|-----------------------|-----------|------------------------|-----------|------------------------|------|------------------------|------|
| | 1990–1999 | 1999–2000 FAA Panel | | 2000–2001 FAA Panel | | 1999–2004 FAA Panel | |
| Real Yield (% chg) | -2.0 | -2.2 | -1.7 | -2.2 | -1.8 | -1.4 | -1.6 |
| Load Factors (pts/yr) | 1.0 | -0.3 | -0.2 | -0.4 | 1.0 | -0.1 | 0.3 |
| Seats per Aircraft | -1.1 | 0.4 | 0.3 | 0.4 | 0.3 | 0.4 | 0.3 |
| Enplanements (% chg) | 3.3 | 2.3 | 2.5 | 2.3 | 2.4 | 3.2 | 2.6 |

After taking these various factors into account, the panel arrived at the same conclusion as the FAA and predicted that the trend toward small aircraft sizes would reverse itself over the next five years. This change in direction, the panel believes, will not come in the form of a dramatic rise in the number of widebody aircraft. Rather, it will occur largely as a result of the practice of replacing older planes with larger versions of the same model (as well as the exclusion of regional carriers from the calculations). Overall, the panel expected the average aircraft size in domestic fleets to rise 0.3 seat per aircraft annual through 2004.

Passenger Enplanements

Forecasts of passenger enplanements must be consistent with expected declines in real yield and rates of economic growth. Although certain segments of the business market may grow sluggishly or even decline in the years ahead, the overall size of the business market is likely to grow at a rate similar to that of the gross national product. The distinction between business and pleasure travel, however, will become less discernible as business travelers become more price sensitive and place greater emphasis on multiple-purpose trips, such as those involving out-of-town conventions held at leisure-oriented destinations. The exponential growth of business-related travel to Orlando and Las Vegas is illustrative of the strength of the market for mixed-purpose trips.

As a general rule, the panel concluded, air travel is more of a complement to electronic forms of communication, such as e-mail and Internet-based commerce, than a substitute for it. Online commerce appears to be vastly expanding the interaction between geographically dis-

persed business and consumers through the country. Demographic and socioeconomic trends, such as the aging of the population, the growing proportion of citizens with a college education, and the rapid population growth of cities in temperate regions, also appear favorable for the growth of air travel.

The panel projected that enplanements would grow 2.5 percent during 1999, 2.4 percent during 2000, and 2.6 percent over the entire period between 1999 and 2004—estimates similar to FAA forecasts. Much of this growth will come as a result of the stimulatory effects of low fares introduced to the market by start-up airlines as well as by Southwest. While one of these carriers now serves the vast majority of major airports, they still have abundant expansion opportunities, especially along the Eastern Seaboard.

The specter of capacity shortages at major airports (as well as air traffic control concerns) will markedly affect the rates of growth in individual citypairs. Nevertheless, recent history suggests that these issues will not substantially affect the overall rate of traffic growth. Such a conclusion reflects not only the availability of capacity at secondary airports, but also emerging technological and managerial innovations—developments that are allowing existing airports to accommodate far more passengers than seemed possible only a decade ago.

The panel’s deliberations and the FAA forecasts point toward a dynamic and efficiently functioning market for air travel, provided that the industry can overcome vexing constraints to expansion. As the new millennium unfolds, the industry’s ability to resolve problems relating to pilot shortages, air traffic control problems, and rising environmental opposition to new airports will have enormous implications for American mobility.

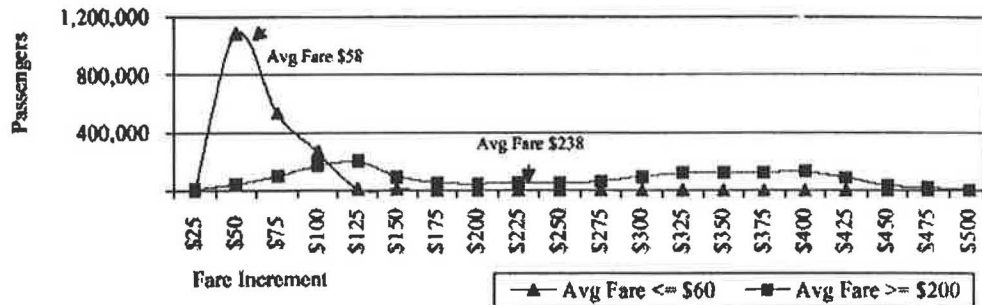


FIGURE 1 Passengers over fare increments: markets with average fare of \$200 or more versus those with average fare of \$60 or less; 250 miles or less.