APPENDIX

The Industry and Its Regulators

This appendix is descriptive, not analytical. It provides background material on the airlines for those readers who feel that an institutional orientation will aid their understanding of the main text. It also contains information on industry structure and regulation not readily available elsewhere.

Historical Sketch of the Industry and Its Regulation

The first air passenger service in the United States began in 1914 (a flying boat operating between St. Petersburg and Tampa, Florida); it lasted only four months. Commercial air transport did not make significant headway until after the First World War. What gave impetus to the industry was the passage of the Air Mail Act of 1925 (also called the Kelly Act), and then, a year later, the Air Commerce Act of 1926. These acts were passed after a number of aircraft operators had tried to provide scheduled passenger and cargo service in the early 1920s, only to find revenues failing to cover costs. The Air Mail Act sought to promote civil aviation by ordering the carriage of airmail to be transferred from military planes flown by Army personnel to private carriers. The contractual arrangements were generous, and domestic commercial transport grew from thirteen operators and 1.3 million revenue passenger-miles in 1926 to thirty-eight operators and 85.1 million revenue passenger-miles in 1930.

The Air Commerce Act also marked the beginning of federal regulation of aviation. The act provided that (a) all aircraft had to be registered, (b) pilots had to be certificated, (c) the secretary of commerce was to establish air traffic rules, (d) lighted civil airways and beacons for navigation were to be established, and (e) there were to be civil penalties for nonconformity with the act's provisions. The passage of the act meant that administration of powers was shared by three agencies: the Department of Commerce, which administered air safety; the Post Office Department, which let mail contracts; and the Interstate Commerce Commission, which controlled airmail rates.  

The depression of the 1930s saw rapid, if somewhat sporadic, growth in air service and remarkable technical advances in aircraft. There was growth each year despite the general economic downturn and even in the face of a temporary suspension of certain mail contracts in 1934. Like many other industries during this period, the established airline operators sought federal aid and, in particular, protection from "excessive competition." Partly as a result of industry pressure, the Air Mail Act of 1934 was passed later in the year, returning airmail contracts to the carriers and giving some minor federal control over entry.

In 1938, Congress established what has evolved into today's Civil Aeronautics Board. Entitled the Civil Aeronautics Act of 1938, the law set up a Civil Aeronautics Authority, an administrator in the authority, and an Air Safety Board. In 1940, the Civil Aeronautics Authority was supplanted by the Civil Aeronautics Board (CAB), the Air Safety Board was abolished and its functions transferred to the CAB, and both the CAB and the administrator and his staff (designated the Civil Aeronautics Administration by the secretary of commerce) were transferred to the Department of Commerce. Under the provisions of the 1938 act, the federal government was charged with, among other things, (a) determining which carriers would be allowed to serve which routes except for the routes already served by existing carriers (and thus, in a broad sense, entry into the industry), (b) the regulation of rates charged by the carriers, and (c) setting and maintaining standards for air safety.

Essentially, there were three reasons for congressional action. First, the 1934 act had distributed responsibility among three agencies, and problems of coordination proved overwhelming. According to Caves, "in the years 1934 through 1938, no agency was a staunch defender of the existing arrangements." In fact, the Federal Aviation Commission recommended in 1935 a "wholesale revision that would centralize authority in a single new commission." Second, the 1934 act's provision for airmail subsidy through contract bidding proved "unworkable." It appeared that carriers would "buy in" routes at very low bids in hopes of making up losses over the long run through monopoly exploitation of nonmail service. Third, the industry was allegedly characterized by chaos, arising in part out of the frailties of the competitive bidding mechanism. Investment was risky, and established operators again argued that the trouble was due to "irresponsible" elements in the industry which perpetuated "overcompetition." Under one provision of the 1938 act, the sixteen established operators were issued "certificates of public convenience and necessity" and were given the right and some obligation to continue serving those routes they had been serving; this later became known as the "grandfather clause."

Table A-1 summarizes the industry's growth from the establishment of comprehensive federal regulation in 1938 through 1970. At the beginning of the Second World War a number of civilian aircraft were given over to the military, and consequently traffic (in revenue ton-miles) grew at a slower rate than would have been the case without this constraint. After an initial spurt following the end of the war, reflecting an increased supply of aircraft, traffic growth slowed down. In 1949, it rebounded for a rela-

5. Frederick, Commercial Air Transportation, pp. 81-82.
6. For a description of technological change in the U.S. commercial aircraft industry, see Almarin Phillips, Technology and Market Structure: A Study of the Aircraft Industry (Lexington Books, 1971). It was during the 1930s that the Douglas DC-3 was introduced into commercial service.
7. The reason for the suspension was alleged collusion between mail carriers and postal officials of the displaced Republican administration, and because of other abuses under the Mail Pay Act of 1930. A court case settled in 1941 reported there was no fraud in the airmail contracts canceled in 1934. See Frederick, Commercial Air Transportation, pp. 82, 83.
10. Ibid., p. 125.
11. Ibid., p. 124.
13. Passenger load factors (the proportion of seats filled) in domestic service rose from 57.9 percent in 1940 to 89.4 percent in 1944. Ibid., p. 26.
Table A-1. Airline Traffic, Investment, and Revenue in Total U.S.
Domestic Operations, 1938–70

<table>
<thead>
<tr>
<th>Year</th>
<th>Total revenue (ton-miles)</th>
<th>Total investment (dollars)</th>
<th>Total operating revenue (dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1938</td>
<td>55.7</td>
<td>30.7</td>
<td>42.8</td>
</tr>
<tr>
<td>1939</td>
<td>76.8</td>
<td>36.3</td>
<td>55.9</td>
</tr>
<tr>
<td>1940</td>
<td>114.5</td>
<td>55.4</td>
<td>76.9</td>
</tr>
<tr>
<td>1941</td>
<td>151.3</td>
<td>63.2</td>
<td>97.3</td>
</tr>
<tr>
<td>1942</td>
<td>170.0</td>
<td>77.9</td>
<td>108.1</td>
</tr>
<tr>
<td>1943</td>
<td>209.9</td>
<td>98.0</td>
<td>122.8</td>
</tr>
<tr>
<td>1944</td>
<td>278.9</td>
<td>129.4</td>
<td>160.7</td>
</tr>
<tr>
<td>1945</td>
<td>411.0</td>
<td>171.2</td>
<td>214.2</td>
</tr>
<tr>
<td>1946</td>
<td>654.4</td>
<td>252.5</td>
<td>316.7</td>
</tr>
<tr>
<td>1947</td>
<td>698.4</td>
<td>309.6</td>
<td>364.3</td>
</tr>
<tr>
<td>1948</td>
<td>733.0</td>
<td>335.2</td>
<td>442.0</td>
</tr>
<tr>
<td>1949</td>
<td>851.0</td>
<td>340.8</td>
<td>496.3</td>
</tr>
<tr>
<td>1950</td>
<td>1,070.9</td>
<td>356.3</td>
<td>578.7</td>
</tr>
<tr>
<td>1951</td>
<td>1,346.9</td>
<td>375.7</td>
<td>729.2</td>
</tr>
<tr>
<td>1952</td>
<td>1,549.4</td>
<td>447.5</td>
<td>844.0</td>
</tr>
<tr>
<td>1953</td>
<td>1,783.6</td>
<td>525.3</td>
<td>966.7</td>
</tr>
<tr>
<td>1954</td>
<td>1,989.5</td>
<td>561.5</td>
<td>1,068.2</td>
</tr>
<tr>
<td>1955</td>
<td>2,382.3</td>
<td>631.8</td>
<td>1,238.4</td>
</tr>
<tr>
<td>1956</td>
<td>2,730.1</td>
<td>765.2</td>
<td>1,399.8</td>
</tr>
<tr>
<td>1957</td>
<td>3,138.2</td>
<td>977.0</td>
<td>1,596.4</td>
</tr>
<tr>
<td>1958</td>
<td>3,120.3</td>
<td>1,141.6</td>
<td>1,693.2</td>
</tr>
<tr>
<td>1959</td>
<td>3,574.9</td>
<td>1,421.9</td>
<td>2,008.4</td>
</tr>
<tr>
<td>1960</td>
<td>3,732.9</td>
<td>1,703.8</td>
<td>2,178.3</td>
</tr>
<tr>
<td>1961</td>
<td>3,899.1</td>
<td>1,988.9</td>
<td>2,304.9</td>
</tr>
<tr>
<td>1962</td>
<td>4,440.9</td>
<td>2,157.3</td>
<td>2,588.6</td>
</tr>
<tr>
<td>1963</td>
<td>4,831.2</td>
<td>2,124.8</td>
<td>2,790.1</td>
</tr>
<tr>
<td>1964</td>
<td>5,600.6</td>
<td>2,252.3</td>
<td>3,168.8</td>
</tr>
<tr>
<td>1965</td>
<td>6,774.3</td>
<td>2,633.4</td>
<td>3,690.8</td>
</tr>
<tr>
<td>1966</td>
<td>8,053.9</td>
<td>3,411.3</td>
<td>4,171.5</td>
</tr>
<tr>
<td>1967</td>
<td>9,982.4</td>
<td>4,580.8</td>
<td>4,980.9</td>
</tr>
<tr>
<td>1968</td>
<td>11,461.6</td>
<td>5,705.0</td>
<td>5,691.4</td>
</tr>
<tr>
<td>1969</td>
<td>12,556.3</td>
<td>6,275.6</td>
<td>6,514.2</td>
</tr>
<tr>
<td>1970</td>
<td>13,877.9*</td>
<td>6,810.6*</td>
<td>7,180.1*</td>
</tr>
</tbody>
</table>


a. Includes intra-Alaska and intra-Hawaii operations.

Appendix

...tively vigorous annual rate of growth, ranging between 12 and 26 percent, until the recession year of 1958, when traffic fell by 0.6 percent.

The longer-range and more comfortable Douglas DC-6 and DC-7 and the Lockheed Constellation and Super Constellation were introduced over the period 1947–53, followed by the British-built Vickers Viscount in 1955. The introduction of jets in 1958 unfortunately coincided with an unanticipated traffic decline, and many carriers found themselves in financial straits. However, traffic revived in the early 1960s, rising to an annual rate of about 20 percent over the period 1965–68. This growth resulted in part from lower costs, the widespread introduction of discount fares, and improved service made possible by turbine-powered aircraft.\[14\] The growth in air travel once again stagnated in 1970, reflecting the general economic recession, but had returned almost to historical levels by the time of the 1973 "energy crisis."

During the Second World War the Board spent most of its energies making sure that the airlines cooperated with the military in the war effort, although it did bring about two substantial fare reductions in 1943 and 1945.\[15\] Immediately after the war, the Board initiated an experiment to provide feeder air service and gave temporary operating authority to a new class of carriers—the local service airlines, whose certificates were made permanent by law in 1955.\[16\] In 1949, the Board certificated four all-cargo airlines and in 1952 established a category of carriers exempt from economic regulation—those willing to operate aircraft having a maximum gross takeoff weight of 12,500 pounds or less (air taxis). Coach service, with lower fares, was introduced in 1948 and was encouraged as official policy in 1951.

The Board approved two major fare increases in 1947 and one in 1948. The widespread introduction of coach service during the early 1950s

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16. The Board found itself in a typical regulator's dilemma. With a shortage of aircraft and rising demand, price rationing would have meant fare increases. On the other hand, with load factors rising, per-passenger (accounting) costs were falling and thus profits were increasing. In the end the Board chose to limit profits rather than price-ration service.
lowered the average fare significantly, and fares remained fairly stable until 1958, when the Board approved fare increases, in part to offset traffic declines. To establish a more formal policy toward the regulation of air fares, the Board held the General Passenger Fare Investigation over the period 1956–60.18

As jet aircraft became more widespread during the 1960s and as their operating economies became evident, the Board did two things. First, it encouraged the introduction of widespread availability of discount fares, thus lowering average price per ticket. Second, the Board expanded greatly air carrier route authorizations and in particular increased the number of competitors on routes between large cities. However, by the end of the decade a combination of cost inflation, a slowing down of real productivity increases, and falling traffic depressed industry profits, prompting Board approval of significant fare increases in 1969 and 1971. It was during the period between the two increases that the Board initiated and completed much of its second long-range review of fare policy—the Domestic Passenger Fare Investigation.19

The regulatory institution was changed somewhat in 1958 when Congress, prompted by two tragic midair collisions the year before, passed the Federal Aviation Act of 1958, setting up the Federal Aviation Agency (FAA). This had the effect of separating safety regulation, which was assigned to the FAA, from economic regulation, which remained with the CAB.20 The act also transferred federal airport-airway support functions from the Department of Commerce to the new agency. In 1966 Congress established the Department of Transportation (DOT), renaming the FAA the Federal Aviation Administration and making it a part of DOT. The CAB remained an independent regulatory agency.

Industry Organization and Service

The airlines clearly have come to dominate the common-carrier, or commercial, market for intercity passenger trips.21 However, they still fall

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18. For a brief discussion of this investigation, see Chapter 8.
20. However, responsibility for investigating regulated-carrier aircraft accidents remained with the Board until transferred to the National Transportation Safety Board in the 1966 Department of Transportation Act.

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### Table A-2. Number of Air Carriers, Revenue Ton-Miles, Investment, and Revenue, U.S. Domestic Operations, by Carrier Group, 1970

<table>
<thead>
<tr>
<th>Carrier group</th>
<th>Number of carriers</th>
<th>Revenue ton-miles</th>
<th>Investment</th>
<th>Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Millions</td>
<td>Percent of total</td>
<td>Total (millions of dollars)</td>
<td>Percent of total</td>
</tr>
<tr>
<td>Trunk</td>
<td>11</td>
<td>12,288.7</td>
<td>88.1</td>
<td>5,708.3</td>
</tr>
<tr>
<td>Local service</td>
<td>9</td>
<td>851.5</td>
<td>6.1</td>
<td>616.5</td>
</tr>
<tr>
<td>Supplemental</td>
<td>15</td>
<td>399.9</td>
<td>2.9</td>
<td>87.2</td>
</tr>
<tr>
<td>All-cargo</td>
<td>2</td>
<td>301.5</td>
<td>2.2</td>
<td>62.3</td>
</tr>
<tr>
<td>Commuter</td>
<td>179</td>
<td>47.1</td>
<td>0.3</td>
<td>44.4</td>
</tr>
<tr>
<td>Intra-Hawaii</td>
<td>2</td>
<td>39.9</td>
<td>0.3</td>
<td>24.3</td>
</tr>
<tr>
<td>Intra-Alaska</td>
<td>4</td>
<td>36.1</td>
<td>0.2</td>
<td>30.0</td>
</tr>
<tr>
<td>Helicopter</td>
<td>3</td>
<td>1.2</td>
<td>*</td>
<td>0.4</td>
</tr>
<tr>
<td>Total</td>
<td>223</td>
<td>13,946.9</td>
<td>100.0</td>
<td>6,526.9</td>
</tr>
</tbody>
</table>


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23. Not included are the hundreds of air taxi operators who provide point-to-point service on demand, the plethora of private, general aviation aircraft, ranging from the omnipresent "Piper cub" to well-outfitted corporate jets, and the state-regulated intrastate carriers, the most notable being in the California corridor market, where Pacific Southwest Airlines (PSA) dominates, and the recent development in Texas, where a brand-new intrastate carrier, Southwest Airlines, is making significant headway into the markets of Braniff (a trunk carrier) and Texas International Airlines (one of the local service carriers).
Table A-3. Revenue Ton-Miles, Investment, and Revenue for Domestic 
Operations, U.S. Trunk Carriers, 1970

<table>
<thead>
<tr>
<th>Carrier and group</th>
<th>Revenue ton-miles</th>
<th>Investment</th>
<th>Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Millions of miles</td>
<td>(millions of dollars)</td>
<td>(millions of dollars)</td>
</tr>
<tr>
<td>American</td>
<td>2,202.9</td>
<td>17.9</td>
<td>1,023.1</td>
</tr>
<tr>
<td>Eastern</td>
<td>1,417.8</td>
<td>11.5</td>
<td>752.0</td>
</tr>
<tr>
<td>Trans World</td>
<td>1,594.1</td>
<td>13.0</td>
<td>751.5</td>
</tr>
<tr>
<td>United</td>
<td>3,250.0</td>
<td>26.7</td>
<td>1,243.0</td>
</tr>
<tr>
<td>Big four</td>
<td>8,497.0</td>
<td>69.1</td>
<td>3,769.6</td>
</tr>
<tr>
<td>Braniff</td>
<td>436.7</td>
<td>3.5</td>
<td>207.0</td>
</tr>
<tr>
<td>Continental</td>
<td>698.9</td>
<td>5.6</td>
<td>335.1</td>
</tr>
<tr>
<td>Delta</td>
<td>1,377.0</td>
<td>11.2</td>
<td>480.5</td>
</tr>
<tr>
<td>National</td>
<td>304.8</td>
<td>2.5</td>
<td>226.1</td>
</tr>
<tr>
<td>Northwest</td>
<td>453.9</td>
<td>3.7</td>
<td>443.3</td>
</tr>
<tr>
<td>Western</td>
<td>542.5</td>
<td>4.4</td>
<td>246.7</td>
</tr>
<tr>
<td>Other trunklines</td>
<td>3,791.7</td>
<td>30.9</td>
<td>1,938.8</td>
</tr>
<tr>
<td>Total</td>
<td>12,288.7</td>
<td>100.0</td>
<td>5,708.3</td>
</tr>
</tbody>
</table>

Sources: U.S. Civil Aeronautics Board, Air Carrier Traffic Statistics (December 1971), pp. 11-16; and 
Air Carrier Financial Statistics (December 1970), pp. 6-9, 25. Figures may not add to totals because of 
rounding.

a. Includes data for Northeast, which merged with Delta on August 1, 1972.
b. National and Northwest were adversely affected by strikes during this period.

eyes have accounted for nearly 88 percent of domestic revenue ton-miles in recent years. This group also accounts for a similarly high fraction of industry investment and yearly revenues. (A breakdown of traffic, investment, and revenue by individual trunk carrier is contained in Table A-3.)

By the end of 1972 there were eight local service, or, more appropriately, regional, carriers which, though individually geographically concentrated, collectively blanket the country. Originally these carriers were established by the Board to provide feeder service to the trunks but since have evolved into what amounts to miniature trunk airlines. Together they account for approximately 10 percent of the industry revenue (Table A-2).

As of December 1970, there were thirteen supplemental carriers providing nonscheduled, charter service domestically (and in all but two cases—Johnson and McCulloch—internationally as well).

24. They are: Allegheny Airlines, Frontier Airlines, Hughes Air Corporation (Air West), North Central Airlines, Ozark Air Lines, Piedmont Aviation, Southern Airways, and Texas International Airways. (Mohawk merged with Allegheny April 12, 1972.)

25. See Eads, The Local Service Airline Experiment.


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was established by the Board on an experimental basis in 1962, and in 1966, ten supplementals were given permanent certificates by the Board, with the approval of the President. As shown in the table, the supplementals account for only a small fraction of the industry.

There are two all-cargo carriers in domestic service, Airlift International and the Flying Tiger Line, of which the latter is larger (in domestic service). First certificated in 1949, this group provides regularly scheduled cargo service between major cities in the United States as well as cargo and some supplemental passenger service abroad. As a fraction of the industry, they are about the same size as the supplementals (Table A-2).

Beginning in 1952, any airline enterprise has been able to escape CAB economic regulation (but not FAA safety regulation) by operating with aircraft having a maximum gross takeoff weight of 12,500 pounds or less. In July 1972, this size restraint was liberalized to a maximum of thirty seats and a net takeoff weight of 7,500 pounds. The majority of such operators are air taxis, which provide service on demand. However, in 1970 there were 179 commuter airlines which offered regularly scheduled service, in many cases in direct competition with trunk or local service carriers. While obviously holding great potential for expanded air service, their traffic in 1970 was less than 1 percent of total commercial revenue ton-miles (Table A-2).

There are three other official CAB carrier groups. First, the intra-Hawaii carriers—Aloha Airlines and Hawaiian Airlines—provide head-to-head competition among the islands, with Hawaiian being the older and larger. Second, there are four intra-Alaska carriers—Kodiak Airways, Reeve Aleutian Airways, Western Alaska Airlines, and Wien Consolidated Airlines. Third, CAB-certificated helicopter service is provided by Chicago Helicopter Airways, New York Airways, and San Francisco–Oakland Helicopter Airlines. Altogether, these three groups account for approximately 1 percent of the domestic industry (Table A-2).

This study deals primarily with the trunk carriers, which currently account for approximately nine-tenths of the domestic market. Table A-3 breaks out traffic, investment, and revenue data for each of these ten carriers.


28. Maximum passenger seating under the former restraint was typically twenty or less, depending on aircraft. See CAB Order 72-7-61 (July 18, 1972), p. 2.

29. A fourth carrier, Los Angeles Airways, suspended operations as of October 8, 1970, due to bankruptcy.
By convention, these carriers are divided into the “big four” and the “other trunks.” Table A-3 indicates why this is a logical division. Except for Delta, none of the other trunks approaches the size of the smallest of the big four, Eastern, by any measure. The smaller other trunks have yearly revenues only about one-fifth those of United, the largest carrier. By most size measures, the big four account for approximately two-thirds of the national market.

Some of the trunk carriers, such as American, TWA, and United, are far-flung geographically, whereas Western and others are primarily regional. In any case, trunk carriers typically compete with at least one other trunk carrier in significant city-pair markets. (Table 7-3 describes this characteristic of industry competition in some detail.) United, Braniff, Delta, and (until 1971) Northwest all have approximately one-third of their traffic in monopoly markets, whereas TWA, National, and Northeast have a much smaller percentage and thus are said to face more competition.

As a group, the other trunks have a slightly larger share of monopoly traffic than the big four. Overall, about 25 percent of domestic trunk traffic is carried in markets where there is no more than token competition. About one-half of the traffic is in markets characterized by competition between two trunk carriers. The remaining one-fourth of the traffic is generated in markets where there are three or more carriers, each receiving at least 10 percent of the traffic.

The extent of head-to-head competition between carriers in the largest markets varies by carrier pair. In two cases among the top 135 markets there is no competition between carriers (Continental-Northeast and Northeast-Western) and in several others, very little (for example, American-Western, Braniff-National, Braniff-Northeast, Braniff-Western, Con-

30. Pan American World Airways (the country’s largest carrier) has international authority only (although it does carry a small amount of domestic traffic strictly ancillary to its international operations), and thus is not included as a trunk in this study.

31. Until 1959, Eastern was in third place, but dropped behind Trans World Airlines to fourth in 1959 following strikes by mechanics and flight engineers in the latter part of 1958. By 1970, Eastern’s revenues were higher than TWA’s. United took over first place (from American) when it merged with Capital Airlines in 1961.

32. CAB Docket 22916, Exhibit BOR-R-501.


34. The source cited in the previous footnote displays in tabular form for 1970 the extent of carrier-pair competition in the 135 markets representing the union of the set of 100 top city-pair markets in terms of revenue passenger-miles and the set of 100 top markets in terms of enplaned passengers. Ibid.

35. These conclusions are drawn from a recent compilation of service authorizations made available to the authors by James F. Taylor of the Boeing Commercial Airline Company. To our knowledge, the CAB compiles no similar series, though official route maps are available. Essentially, the twenty “large hubs” constitute the largest city markets (Boston, New York, Philadelphia, and so on), whereas the thirty-nine “medium hubs” constitute the next largest markets (Buffalo, Richmond, Indianapolis, and so on).

Aeronautics Board promotes and regulates the airline industry." In that publication, Board Chairman Charles S. Murphy said, "I wish to emphasize the fact that we are charged with responsibility to promote as well as regulate air transportation. We regard the promotional aspects of our work as very important." Although the role of promotion was an innovation for a regulatory agency when the Civil Aeronautics Act was passed in 1938, it may be recalled that one of the basic reasons for establishing regulation was to rationalize the government's support of civil aviation, principally its program of airmail subsidy. The Board's present promotional activities take two forms: (a) direct subsidy, and (b) what may be termed "general." The statutory basis for subsidy is given in section 406(b) of the Federal Aviation Act. In determining pay for airmail, the Board is to consider, among other factors: the need of each . . . air carrier for compensation for the transportation of mail sufficient to insure the performance of such service, and, together with all other revenue of the air carrier, to enable such air carrier under honest, economical, and efficient management, to maintain and continue the development of air transportation to the extent and of the character and quality required for the commerce of the United States, the Postal Service, and the national defense. In 1951 the Board, by administrative action, separated subsidy from airmail payments. The trunk carriers went off subsidy in 1959, except for minor payments to Northeast during 1964–68, and a class rate subsidy formula for local service airlines was instituted in 1961. During fiscal year 1972 subsidy payments totaled $67.2 million, including $4.4 million for the Alaskan carriers. 

The Board promotes the airlines in other, general ways, deriving its mandate principally from the legislative "Declaration of Policy" which comprises section 102 of the Federal Aviation Act:

In the exercise and performance of its powers and duties under this Act, the Board shall consider the following, among other things, as being in the public interest, and in accordance with the public convenience and necessity:

38. Ibid., p. iii.
41. This method of payment was designed to encourage carriers to reduce their subsidy needs. See Civil Aeronautics Board, "Subsidy for United States Certified Air Carriers" (August 1972; processed), pp. 9–10, and App. 7.
42. Ibid., App. 7.

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(a) The encouragement and development of an air-transportation system properly adapted to the present and future needs of the foreign and domestic commerce of the United States, of the Postal Service, and of the national defense;
(b) The regulation of air transportation in such manner as to recognize and preserve the inherent advantages of, assure the highest degree of safety in, and foster sound economic conditions in, such transportation, and to improve the relations between, and coordinate transportation by, air carriers;
(c) The promotion of adequate, economical, and efficient service by air carriers at reasonable charges, without unjust discriminations, undue preferences or advantages, or unfair or destructive competitive practices;
(d) Competition to the extent necessary to assure the sound development of an air-transportation system properly adapted to the needs of the foreign and domestic commerce of the United States, of the Postal Service, and of the national defense;
(e) The promotion of safety in air commerce; and
(f) The promotion, encouragement, and development of civil aeronautics.

In carrying out this promotion mandate, the Board has shown particular sensitivity to downturns in industry profits and it has maintained price levels which tend to maximize industry output, discriminatory fare structures which augment quantity demanded, and price and entry regulation which promote investment in aircraft.

Entry (route authorizations). Section 401(a) of the Federal Aviation Act states:
No air carrier shall engage in any air transportation unless there is in force a certificate issued by the Board authorizing such air carrier to engage in such transportation.

Section 401(d)(1) states:
The Board shall issue a certificate authorizing the whole or any part of the transportation covered by the application, if it finds that the applicant is fit, willing, and able to perform such transportation properly, and to conform to the provisions of this Act and the rules, regulations, and requirements of the Board hereunder, and that such transportation is required by the public convenience and necessity; otherwise such application shall be denied.

Finally, section 401(e)(1) gives the Board power to prescribe terms and conditions of the certificate:
Each certificate . . . shall specify the terminal points and intermediate points, if any . . . and there shall be attached to the exercise of the privileges granted by the certificate . . . such reasonable terms, conditions, and limitations as the public interest may require.

In short, this means that no carrier may operate in scheduled interstate

43. See the discussion of the Board's implied regulatory objectives in Chapter 9.
service without first obtaining CAB permission and then only on those routes for which authority is granted. Further, the Board can and often does attach restrictions, such as limiting nonstop service. The usual procedure is for the Board to hold "area investigations" during which carriers are invited to apply for extensions in their service. Carriers also can apply unilaterally. Since the Board controls entry into city-pair markets, it effectively controls entry into the industry. For example, not a single new trunk carrier has been certificated in the Board's history, although many of the local service carriers have grown into miniature trunks.44

Exit (abandonment). Section 401(j) of the act states:

No air carrier shall abandon any route, or part thereof, for which a certificate has been issued by the Board, unless ... the Board shall find such abandonment to be in the public interest.

This gives the Board the power to require carriers to continue providing service even where the carrier would prefer to suspend or even abandon service altogether.

Fares. Section 404(a) of the act requires carriers to establish, observe, and enforce just and reasonable individual and joint rates, fares, and charges. ... 45

Section 1002(d) states:

Whenever ... the Board shall be of the opinion that any ... rate, fare, or charge ... is or will be unjust or unreasonable, or unjustly discriminatory, or unduly preferential, or unduly prejudicial, the Board shall determine and prescribe the lawful rate, fare, or charge (or the maximum or minimum, or the maximum and minimum thereof) thereafter to be ... charged.

The terms "unreasonable" and "unjust" generally refer to whether a rate is "too high," leading to excessive return on investment, or "too low," possibly impairing other carriers and service in other markets. "Discrimination" refers to rate or fare differences between classes of consumers where there are no demonstrable like differences in costs. Finally, following the practice of the Interstate Commerce Commission, "preference" and "prejudice" are used to describe rate and fare relationships among geographical points, as, for hypothetical example, a higher fare from New York to Reno, Nevada, than from New York to San Francisco, a longer distance. Thus, the Board has considerable authority over carrier rates. But note that the power may not be exercised; that is, rates or rate changes may be approved implicitly, without Board action; also the Board may choose to set only maximum or minimum rates, or both.

In determining the lawfulness of rates, the Board is required by the "Rule of Ratemaking," which comprises section 1002(c) of the act, to consider among other factors:

1. The effect of such rates upon the movement of traffic;
2. The need in the public interest of adequate and efficient transportation of persons and property by air carriers at the lowest cost consistent with the furnishing of such service;
3. Such standards respecting the character and quality of service to be rendered by air carriers as may be prescribed by or pursuant to law;
4. The inherent advantages of transportation by aircraft; and
5. The need of each air carrier for revenue sufficient to enable such air carrier, under honest, economical, and efficient management, to provide adequate and efficient air carrier service.

Clause (1) has been interpreted as having to do with the price elasticity of demand, whereas (5) has been relied on (by the carriers at least) as justifying rate increases whenever their rate of return on investment falls below that which the Board terms reasonable.

Mergers. Section 408(a) of the act states:

It shall be unlawful unless approved by order of the Board as provided in this section—

1. For two or more air carriers ... to consolidate or merge their properties ... into one person for the ownership, management, or operation of the properties.

Thus, air carriers seeking to merge must obtain prior permission from the Board. Moreover, in passing on merger proposals, the Board has the following guideline [section 408(b);]

Unless ... the Board finds that the ... merger ... will not be consistent with the public interest ... it shall by order approve such ... merger ... Provided, That the Board shall not approve any ... merger ... which would result in creating a monopoly or monopolies and thereby restrain competition or jeopardize another air carrier not a party to the ... merger.

In addition to these rather broad standards, the Board is also under some obligation to pay homage to section 7 of the Clayton Act (38 Stat. 731-32).46

Intercarrier agreements. In section 412(a) of the act, carriers are directed to file with the Board a copy of all agreements relating to pooling or apportioning earnings, losses, traffic, service, or equipment, or relating to the establishment of transportation rates, fares, charges, or classifi-

44. See Eads, The Local Service Airline Experiment, Chap. 6.
45. Joint rates are prices negotiated between carriers and charged for their collective services, as, for example, a passenger traveling from New York to Denver via Kansas City on two different carriers.
cations, or for preserving and improving safety, economy, and efficiency of operation, or for controlling, regulating, preventing, or otherwise eliminating destructive, oppressive, or wasteful competition, or for regulating stops, schedules, and character of service, or for other cooperative working arrangements.

Section 412(b) requires that
The Board shall by order disapprove any such contract or agreement . . . that it finds to be adverse to the public interest.

In fiscal year 1970 the CAB reviewed over one thousand such proposed agreements, relating generally to the operations of the Air Traffic Conference of America (ATCA) and the International Air Transport Association (IATA), problems of airport congestion, technical assistance to foreign airlines, equipment interchanges, passenger baggage and cargo practices, reservations and ticketing, interline traffic procedures, the airline mutual aid agreement (revenue sharing during strikes), the agreement between the airlines and REA Express, et cetera.47

Unfair methods of competition. The act gives the Board the power to regulate "destructive competition." Section 411 reads, in part:
The Board may . . . investigate and determine whether any air carrier . . . has been or is engaged in unfair or deceptive practices or unfair methods of competition . . . If the Board shall find . . . [affirmatively] it shall order such air carrier . . . to cease and desist from such practices or methods of competition.

Quality of service. As discussed extensively in Chapters 4 and 6, the Board regulates service quality implicitly through its regulation of fares. It is important to note, however, that its direct regulation of service quality is rather limited. As mentioned before, section 401(e)(1) of the act gives the Board the power to set certain side constraints on flights, such as the number of intermediate points. However, section 401(e)(4) states that No term, condition, or limitation of a certificate shall restrict the right of an air carrier to add to or change schedules, equipment, accommodations, and facilities for performing the authorized transportation and service as the development of the business and the demands of the public shall require.48

There is, of course, a common-carrier obligation and also some mention of adequacy of service. Section 404(a) reads, in part:
It shall be the duty of every air carrier to provide and furnish . . . air transportation, as authorized by its certificate, upon reasonable request therefor . . . to

48. However, under section 412 (just quoted) the Board can approve (and recently has approved) intercarrier agreements to "self-regulate" capacity, and thus quality of service. (See discussion of capacity agreements in Chapter 7.)

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provide safe and adequate service, equipment, and facilities in connection with such transportation.

However, the question of service adequacy has not been determined in specific detail. For local service carriers the Board once established two round-trips per day as a minimum, but later it encouraged a "use it or lose it" policy and has allowed a number of deviations from the two-flights norm. Finally, there are numerous CAB-imposed rules designed for consumer protection and policed by the Board's Bureau of Enforcement. These include matters relating to carrier liability for passenger baggage, overbooking, passenger ticket refunds, and flight cancellations.

Procedure. The Civil Aeronautica Board promulgates rules and regulations consistent with its powers derived from the Federal Aviation Act. In carrying out its decision-making responsibilities the Board is constrained by the Administrative Procedure Act.49 In practice, Board procedure ranges from an informal delegation of authority to staff members to handle routine intercarrier agreements, to formal, prolonged hearings in major route and rate cases. On occasion, especially where an issue is not particularly significant, the Board will issue a decision directly on the merits of the original petition (taking into consideration possible subsequent filings by interested parties). This procedure is also used in cases where time is of the essence or where a party has petitioned the Board to reconsider a recent decision.

With regard to regulations covering carrier cost reporting and other routine matters, the Board may institute a "rulemaking proceeding." The Board will publish a proposed policy and will invite written comments from interested parties. Another statement by the Board, such as a revised policy or clarification of original, may or may not follow. Then, often after oral argument by counsel to interested parties, the Board will reach a final decision.

Major issues coming before the Board, however, are usually set down for public hearing. This procedure can be rather complicated, although means exist for short-circuiting various stages. In response to the original petition, the Board will order that a hearing be held. An administrative law judge (formerly hearing examiner) is then assigned to the case. A prehearing conference is scheduled, prior to which parties usually, but not always, circulate statements of proposed issues. At the conference the scope of the

49. See Public Law 89-554 (Sept. 6, 1966), 80 Stat. 378, which supersedes the Administrative Procedure Act (60 Stat. 237), where the provision first appeared.
proceeding is defined in more detail (which issues are relevant and which are not), and parties are given an opportunity to request information, such as data on revenues, costs, and service provided, from other parties in the proceeding.

After the prehearing conference, parties exchange testimony and exhibits. Usually parties are given an opportunity for rebuttal testimony and exhibits, and sometimes even surrebuttal. After that, the public hearing is held, presided over by the administrative law judge. The responsibility of this judge is to administer the hearing, certify the record as being true and accurate, and usually, but not always, render an initial decision which here commends to the Board. The Board then may on its own initiative or in response to a protest from an interested party take this decision under advisement and later render its own final decision. Otherwise, the judge's initial decision becomes the final one.

Organization. The Board itself is composed of five members, including a chairman and a vice chairman. All are appointed by the President, with approval by the Senate; no more than three members may be from the same political party. There is a managing director who is chief administrator of the Board's staff and reports to the chairman. The research staff is divided into bureaus. Of particular relevance to regulatory proceedings are the Bureau of Economics, which is a major participant in cases involving rates and fares, and the Bureau of Operating Rights, which is the major protagonist in route and merger cases.

Other Agencies

A number of other federal agencies regulate, or at least have an impact on, the commercial air carriers. The most important of these is the Department of Transportation, which influences the airlines primarily through its Federal Aviation Administration (FAA). The Federal Aviation Act (section 103, as amended) states:

In the exercise and performance of his powers and duties under this Act the Secretary of Transportation shall consider the following, among other things, as being in the public interest:

(a) The regulation of air commerce in such manner as to best promote its development and safety and fulfill the requirements of national defense;

(b) The promotion, encouragement, and development of civil aeronautics;

(c) The control of the use of the navigable airspace of the United States and the regulation of both civil and military operations in such airspace in the interest of the safety and efficiency of both;

(d) The consolidation of research and development with respect to air navigation facilities, as well as the installation and operation thereof;

(e) The development and operation of a common system of air traffic control and navigation for both military and civil aircraft.

Note from this legislative "Declarat of Policy" that Transportation, too, has a promotonal role regarding civil aviation, and the mere existence of a publicly financed FAA attests to this fact.

The main regulatory role of the department's FAA is to set and maintain minimum standards for air safety. The administrator of the FAA, often through formal rulemaking proceedings, issues and enforces rules, regulations, and minimum standards pertaining to the manufacture, operation, and maintenance of the civil air fleet. The agency also certifies new aircraft, inspects flight navigation facilities, and certifies pilots whether for private or commercial purposes. The agency also has other functions, including registration of civil aircraft, and research and development pertaining primarily to aircraft, airport, and airway safety. Finally, two of the agency's most important functions are (a) provision of airport and airway navigation facilities and traffic control, and (b) administration of the airport-airway program arising from the Airport and Airway Development Act of 1970 and the Airport and Airway Revenue Act of 1970. These two responsibilities, of course, directly affect carrier costs of operation as well as safety and convenience to passengers.

Another DOT-related agency affecting the airlines is the National Transportation Safety Board (NTSB) which, among other functions, responsibility for investigating aircraft accidents and determining their causes. If responsibility can be ascertained from the investigation and a violation of FAA safety standards is suspected, then criminal or civil charges, or both, may result.

52. Basically these acts provide for airport-airway subsidies for capital development to be financed out of user charges falling on airline passengers and, to a lesser extent, aircraft owners and operators.

53. The NTSB was established by the Department of Transportation Act of 1966. Although a part of DOT, the NTSB is semiautonomous and reports directly to Congress.