The Operating Ratio as a Yardstick for Measuring Airline Profits

Eddie Rickenbacker
THE OPERATING RATIO AS A YARDSTICK FOR MEASURING AIRLINE PROFITS

By Captain Eddie Rickenbacker,
Chairman of the Board, Eastern Air Lines, Inc.

Since the establishment of economic regulation of the nation's scheduled airlines in 1938, industry profits have in most cases been measured in accordance with the rate-of-return theory. Although rate-making by the Civil Aeronautics Board has been largely confined to the setting of mail rates, the method used has conformed closely to that long employed in the regulation of railroads and public utilities, namely, to allow a specified rate of return on the prudent investment of the enterprise, plus approved operating expenses.

Is it realistic to assume that the airline industry is sufficiently similar in structure and operations to the older utilities and the railroads so that the rate-of-return-on-investment principle of profits determination can be applied alike to both fields? Or will the continued application of this principle to the air carriers starve the carriers of capital and defeat the endeavors of management to build a strong air transportation system?

Instead of using rate-of-return-on-investment as the sole, or even the primary, yardstick for measuring air-carrier earnings, it is submitted that the Board should attach primary significance to the operating ratio. Although this measure is of comparatively recent application in transportation, it is particularly adaptable to industries with a relatively rapid capital turnover, small investment, and heavy risks from competition and economic forces beyond the control of management. Under this method, the carrier's profits are measured by the ratio between operating expenses and operating revenues. If, for example, it is determined that a margin of 20 percent is necessary to pay taxes and dividends, and attract new capital, rates will be fixed so that operating expenses will not exceed 80 percent of operating revenues. Thus, after meeting all such expenses, the airline will have 20 percent of its gross revenues left for taxes, capital requirements, dividends, etc.

This paper is designed to spotlight the advantages of and need for the use of operating ratio as a device for measuring and regulating airline profits.
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HISTORICAL USE OF PROFITS YARDSTICKS

Most railroad and public-utility regulation had its origin in the closing decades of the last century. Almost from the beginning of rate regulation — in some instances considerably after the start of general utility regulation — the rate-of-return philosophy has dominated. Underlying the application of this yardstick for determining allowable profits for industries dedicated to the public service has been the fear that without rate-regulation, railroads and public utilities might charge excessive rates and engage in monopolistic practices inimical to the public interest. Regulation was regarded as the substitute for competition, and one of its objectives was to set rates where they would be if there were active and effective competition. The assumption was that under free competition rates would gravitate to cost, including a fair return on investment.

Until recently there has been little effort on the part of regulatory agencies to adopt a more realistic substitute for the rate of return. Vast sums of money and much time have been devoted to refining the methodology used in applying the rate-of-return principle; in attempting to adjust rate bases to changing economic conditions, as in the case of the long-standing controversy over whether the rate base should be original cost or reproduction; and in debating what elements should be included in the rate of return itself. Only recently, however, has serious consideration been given to the substitution of a basically new approach to the problem.

In transportation, the first significant change came during and after World War II when it became increasingly evident that application of the rate-of-return principle to the motor-carrier industry was wholly unrealistic. The Interstate Commerce Commission, in a series of regional motor-carrier rate cases, recognized that in an industry where the investment is small in relation to the revenues produced, profits could not be tied to the small investment base without reducing them to dangerously low levels. A return on such a base, at rates considered "normal" by conventional utility standards, would leave such a narrow margin between operating expenses and revenues that even a minor fluctuation in either could wipe it out and perhaps turn it into a loss. As the Commission said in a 1948 motor-carrier case:

"The important difference . . . is whether return on investment or operating ratio is the criterion for determining the need for general increases in the rates . . . In industries where the amount of investment is large in relation to total costs, the rate of return on investment generally has been accepted as appropriate for determining revenue needs. In such industries the risk is related more to the amount of investment and less to costs. On the other hand, where the amount of the investment is relatively small in relation to total costs, investment is not the primary factor in determining revenue needs. . . . The owners of motor carriers can hardly be
expected to look to the return on the amount of their investment as an incentive where the principal risk is attached to the substantially greater amount of expense. . . . But for the purpose of determining the need of increases in rates, the criterion must be the carrier's cost.”

Accordingly, the Commission has recognized the usefulness of the operating ratio as a measure of earnings in the motor-carrier industry.

The ICC has also used the operating ratio theory in setting and approving motor bus rates (Investigation of Bus Fares, I.C.C. Docket MC-C-550, 1949), a procedure meeting court approval (County Board of Arlington v. U.S., 101 F. Supp. 328 (1952).) In the former case the ICC approved an operating ratio of 85 percent before normal Federal income taxes for the inter-city bus carriers as a group which is equivalent to a ratio of 83 at the presently prevailing tax level. Further, the National Association of Railroad and Utilities Commissions, through a report of a special committee (presented at annual meeting, November 10-13, 1952), has urged the adoption and use of the operating ratio theory of judging bus fares. As will hereinafter appear, bus companies and air lines are quite similar in financial operating characteristics.

The CAB has asserted that it does not rely exclusively on rate-of-return as a measure of earnings.

"In its brief the carrier strongly objects to the adoption of a fixed return upon the fair value of the carrier's property as the measure of a fair and reasonable rate. The Board does not consider, nor has it ever considered, that a predetermined rate of return upon the so-called 'fair value' of the carrier's property is the measure of reasonableness. The ascertainment of the rate of return upon the actual legitimate investment, that is, the funds which have been legitimately devoted to the enterprise by its owners, does not share the defects of the so-called 'fair value' method and may be considered as evidence bearing upon the reasonableness within the meaning of the Civil Aeronautics Act, albeit not the only such evidence.

"While it would be erroneous to assume that the reasonableness of an air mail rate under the Civil Aeronautics Act should be measured by a fixed and uniform rate of return on the carrier's legitimate investment, it would be equally erroneous to assume that a reasonable rate could be determined in disregard of the relation which the carrier's net earnings bear to its investment. The Civil Aeronautics Act, as previously pointed out, requires the Board to consider the 'need' of the air carrier for a rate which will be sufficient, among other things, to insure the performance of the mail service. Obviously, a carrier would be unable to perform such service unless it were receiving from various sources, including the mail compensation, a total revenue sufficient to cover the total expenses of operation and the capital cost. In determining the 'need'

1 Middle West General Increases, Docket No. M-2723, July 19, 1948, 48 M.C.C. 541. Other motor carrier cases presenting a similar viewpoint on operating ratios are: Central Territory General Increases, 49 M.C.C. 4; Increased Common Carrier Truck Rates in the East, 42 M.C.C. 633; and, Increased Common Carrier Truck Rates in New England, 48 M.C.C. 13.
of the carrier, therefore, it is necessary to inquire into the amount of the carrier's investment and to consider what is necessary to constitute an adequate return on that investment. A specified return on a carrier's investment which would enable that carrier to earn an amount sufficient to cover its capital cost would not be an inflexible measure of the fair and reasonable rate contemplated by the Civil Aeronautics Act; it would, however, constitute significant and valuable evidence to be taken into account in connection with the determination of such a rate. Likewise, the relationship which the carrier's profit bears to its total revenues, would offer some evidence of reasonableness when considered in comparison with similar data of other industries of similar risk. In this connection the ratio between the carrier's investment and the volume of service rendered, when compared with the higher ratio prevailing in other public utilities, would also be a proper subject of consideration."

And it has recognized the inadequacy of the rate-of-return standard in several cases involving mail pay for local service lines. In its decisions of July 21, 1950, setting mail rates for Pioneer Airlines and Trans-Texas Airways, the Board noted that:

"Quantitative standards are not prescribed by the Civil Aeronautics Act for fixing fair and reasonable mail rates. During the war and subsequently, the Board in its informed judgment and weighing all considerations applicable to the mail rate cases before it, concluded that a profit element based on a quantitative standard of a specified return on recognized investment would best promote the objectives of the Act. In a recent mail rate case involving a feeder line and in the instant case, we have encountered situations where, because of an exceptionally high turnover of invested capital, a profit element based on a normal return on investment would be inadequate to enable a small carrier to continue the reasonably vigorous development we are charged to promote and would provide such a carrier with a precariously small margin to cope with the risks and vicissitudes of the highly dynamic airline industry."

and

"The establishment of a future rate predicated on a profit related solely to the very low investment of 13.68 cents per plane mile in this case would produce a margin precariously small to meet unforeseen future events. We believe that the rate for the future period must incorporate an operating margin sufficient to afford reasonable opportunity for management to earn a fair profit within the range established in presently effective final mail rates for other feeder airlines. Accordingly, as the table above indicates, we have provided a profit of 3.54 cents per plane mile before taxes and 2.19 cents per plane mile after taxes at the forecast load factor in order to provide a fair and reasonable rate for the future period."

But the Board has not yet given the affirmative recognition to the operating ratio which it deserves as a measure of airline earnings. Nor has the Board shown adequate recognition of the fact that the airline industry as a whole is characterized by high capital-turnover

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1 Order No. E-4450.
2 Order No. E-4440.
ratios, and that the rate-of-return standard is, for that reason, little more appropriate for large airlines than for small ones.

The incongruity of applying ordinary rate-of-return standards to an airline with a small investment relative to volume of business is shown in the Trans-Texas case just cited. The Board decided to fix the profit element in terms of profit per mile flown, instead of a percentage on investment.

The following table shows the results:

<table>
<thead>
<tr>
<th>Rate of Return</th>
<th>Operating Margin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profits allowed before taxes</td>
<td>25.68%</td>
</tr>
<tr>
<td>Percent on investment</td>
<td></td>
</tr>
<tr>
<td>Percent of expenses</td>
<td></td>
</tr>
<tr>
<td>Profits allowed after taxes</td>
<td>15.89%</td>
</tr>
<tr>
<td>Percent on investment</td>
<td></td>
</tr>
<tr>
<td>Percent of expenses</td>
<td></td>
</tr>
</tbody>
</table>

In other words, the profits finally approved by the Board represented a return on investment of 25.68 percent before taxes and 15.89 percent after taxes — rates of return which are certainly higher than those considered normal in public-utility regulation. Yet the resultant operating ratio of 95.57 percent before taxes and 97.26 percent after taxes indicates that the carrier was being provided a dangerously narrow margin of profit — a margin which even a small change in revenues or expenses would wipe out. Obviously, a traditional rate of return of 6 or 8 percent on the carrier’s investment would have been ridiculously inadequate.

The rate-of-return approach is similarly — if not equally — inappropriate for the airline industry generally, as will be shown.

PROFITS YARDSTICKS FOR THE AIRLINES

Before getting into further detail, it should be pointed out that the airline industry has very little in common with those industries which were first subjected to rate regulation and for whom the rate-of-return measure was devised. There is the obvious similarity of being subject to regulation, but from that point on, the differences become more prominent than the similarities. And they are differences which have a bearing on the standard to be used in measuring earnings.

Absence of Monopoly. The industries to which the rate-of-return standard has traditionally been applied — railroads, gas and electric utilities, street railway companies, water companies, etc. — are frequently referred to as “natural monopolies.” In many cases, competition was not feasible — e.g. it would not be feasible for competing street car companies to lay duplicate sets of tracks on city streets. In all cases, the amount of capital required to enter the business tended to prevent competition. And in all cases, competition was largely lacking. For example, except for the very early days of the railroads when canals furnished substantial competition and a brief period in the early part of the present century when the electric interurban was
a competitor in a few areas, the railroads experienced no real competition until the appearance of the motor bus and truck soon after the close of World War I.

The scheduled airline industry never has had a monopoly status in the same sense as that attained by the public-utility industries. The airlines have always been highly competitive with one another, and, from the inception of scheduled commercial air operations to the present, the industry has experienced keen competition from surface transportation and from the private automobile. That the airlines have been steadily increasing their penetration of the inter-city common-carrier passenger market is a tribute to industry initiative and management; it is not due to a lack of effective competition.

The competition to which the airlines are subjected tends constantly to generate over-capacity. Another result of this competition is the frequent introduction of new plane types, with costly integration periods (including in some cases, expensive groundings) and high depreciation costs. And the cost of this competitive race for the most modern and efficient equipment is going up all the time. Aircraft now on order by the industry to be delivered within the next two and a half years will cost $298,000,000. Current prices for the largest aircraft in operation will approximate $2,000,000, with jet aircraft, when these are introduced, costing from $3,500,000 to $4,000,000 each. By contrast, prior to the mid-1930's, the railroads had made no important equipment changes for decades. Only since the war have they proceeded rapidly with dieselization.

Instability of Revenues and Expenses. For a variety of reasons, airline revenues and expenses — and hence earnings — are subject to violent fluctuations. Let us look at just a few of the reasons. First of all, demand for airline transportation is much more elastic than that for such public-utility services as electric light and power, telephone, gas and even city transit. Just as an illustration, although business generally was booming and reaching new highs every month, airline traffic unaccountably leveled off in 1946-47 at the very time the industry was in the midst of its reconversion and re-equipment program. The result was operating losses of nearly $28,000,000 for the domestic industry.

The effect of accidents upon airline revenues is common knowledge. A spectacular aircraft accident, even though not involving an airline airplane at all, with the dramatic treatment still generally accorded it by the newspapers and radio, can cost the airlines millions of dollars in lost revenues.

Expenses are similarly volatile. The cost of grounding a fleet of aircraft until "bugs" can be worked out can run into the millions.

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1 While domestic scheduled airlines have increased their share of the Class A travel market (rail pullman plus air) from 22.99 percent in 1946 to 55.42 percent in 1952, total common-carrier participation in U.S. inter-city passenger-miles has declined from 26.27 percent to 13.76 percent. Greatest losses have been to the private automobile.
### TABLE I

**RATES OF CAPITAL TURNOVER IN SELECTED INDUSTRIES, 1946 vs. 1949**

<table>
<thead>
<tr>
<th>Industry</th>
<th>1946 Capital Invested (000)²</th>
<th>1946 Total Operating Revenues (000)</th>
<th>Capital Turnover (%)</th>
<th>1949 Capital Invested (000)²</th>
<th>1949 Total Operating Revenues (000)</th>
<th>Capital Turnover (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic Trunk Airlines</td>
<td>$270,744</td>
<td>$329,872¹</td>
<td>121.8</td>
<td>$372,154</td>
<td>$534,708</td>
<td>143.7</td>
</tr>
<tr>
<td>Class I Railways</td>
<td>$21,809,000</td>
<td>$7,622,000</td>
<td>35.0</td>
<td>$23,077,000</td>
<td>$8,580,000</td>
<td>37.2</td>
</tr>
<tr>
<td>Motor Carriers of Passengers</td>
<td>$175,722</td>
<td>$880,627</td>
<td>216.6</td>
<td>$237,954</td>
<td>$379,751</td>
<td>159.6</td>
</tr>
<tr>
<td>Motor Carriers of Property</td>
<td>$206,353</td>
<td>$883,806</td>
<td>428.3</td>
<td>$436,070</td>
<td>$1,894,588</td>
<td>434.5</td>
</tr>
<tr>
<td>Electric Utilities</td>
<td>$13,351,000</td>
<td>$3,815,000</td>
<td>28.6</td>
<td>$17,380,000</td>
<td>$5,069,000</td>
<td>29.2</td>
</tr>
</tbody>
</table>

**Note:** 1949 is the latest year for which complete data are available for all of the included industries. However, capital turnover rates are likely to be higher in 1950-52 for air and motor carriers. For the airlines in 1952 capital invested amounted to $536,954,000 and total operating revenues were $872,590,000. Capital turnover was 162.6 percent.


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¹ Unadjusted for retroactive mail pay.
² Capital stock, surplus, and long-term debt.
In a rapidly expanding industry, where labor costs account for approximately half of the total, a change in wage rates can have a marked effect.

These are but a small sample of the many influences which contribute to the instability of airline earnings.

Capital Turnover and Revenues. The relationship of capital to revenues and costs is a major difference between the airlines and the public utilities and railroads — and a major reason why rate of return is not an appropriate standard for measuring airline profits. Railroads and public utilities generally have a much slower capital turnover than the airlines and motor carriers. A comparison of capital-turnover rates in the railroad, motor-carrier, electric-utility, and airline industries appears below. Treatment of the significance of these industry variations will appear at a later point.

One significant result of the distinction just noted, coupled with the use of the rate-of-return standard for regulating the earnings of the two industries, is the different margin between operating revenues and operating expenses disclosed in the following table. Table 2 shows these relationships for 1946 and for 1949.

### TABLE 2

**OPERATING RATIOS IN SELECTED INDUSTRIES, 1946 vs. 1949**

<table>
<thead>
<tr>
<th></th>
<th>1946</th>
<th>1949</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Operating Revenues (000)</td>
<td>Operating Expenses (000)</td>
</tr>
<tr>
<td>Domestic Trunk Airlines</td>
<td>$329,8721</td>
<td>$339,932</td>
</tr>
<tr>
<td>Class I Railways</td>
<td>7,628,000</td>
<td>6,357,000</td>
</tr>
<tr>
<td>Motor Carriers of Passengers</td>
<td>380.627</td>
<td>299.217</td>
</tr>
<tr>
<td>Motor Carriers of Property</td>
<td>883,806</td>
<td>852,292</td>
</tr>
<tr>
<td>Electric Utilities</td>
<td>3,815,000</td>
<td>2,699,000</td>
</tr>
</tbody>
</table>

**Domestic Trunk Airlines**
- 1946: $329,872
- 1949: $534,708

**Class I Railways**
- 1946: 7,628,000
- 1949: 8,580,000

**Motor Carriers of Passengers**
- 1946: 380,627
- 1949: 379,751

**Motor Carriers of Property**
- 1946: 883,806
- 1949: 1,894,588

**Electric Utilities**
- 1946: 3,815,000
- 1949: 5,069,000

**Note:** See Table 1 for footnote and sources. Operating ratios are shown before and after income taxes.

**ADVANTAGES OF THE OPERATING RATIO AS A YARDSTICK**

The operating ratio has distinct advantages as a yardstick for measuring and for establishing airline profits.

**Minimizing of Risks.** The major advantage of the ratio for this purpose is the protection which it affords against unforeseen fluctua-
tions in revenues or costs in an industry with relatively small investment and rapid capital turnover. The means by which the operating ratio provides such protection can be rather simply explained.

In an industry with a large capital investment and a low rate of capital turnover, profits representing a fair (in the public-utility sense) return on investment will ordinarily represent a substantial proportion of gross revenues. Thus, if a company has a capital investment of $100,000,000 and annual revenues of $40,000,000 (a capital turnover of 40%), a return of 6 percent on investment will represent profits amounting to 15 percent of operating revenues. Because the investment base is large in relation to operating revenues, profits determined on that base will provide a substantial margin over operating expenses—in this case, 15 percent.

But if the relationship of investment and revenues is reversed, so is the effect upon the margin. If investment is $40,000,000 and annual revenues $100,000,000 (a capital turnover of 250%), a return of 6 percent on investment amounts to only 2.4 percent of revenues. With such a margin, a small change in either revenues or expenses can turn the profit into a loss.

As a further illustration, let us look back to some of the figures already given. From Table 1 it is seen that in 1949 the Class I railways grossed 37.2 cents for every dollar of capital investment, while the domestic trunk airlines obtained 143.7 cents. If it is assumed that each industry is to be allowed a return of 6 percent on each dollar of invested capital, the railways will have a profit equal to 16.1 percent of their gross revenues, while the airlines' profit would be only 4.2 percent of revenues. In other words, after paying their operating expenses, the airlines would have left only about one-fourth as much of their yearly gross revenues as would the railroads.

But now let us suppose that the two industries experience a 10 percent increase in expenses. The railways would still have an operating profit, but the airlines would be in the red.

Additional computations would only serve to dramatize the points already made: (1) to allow a return on investment, at rates traditional in the public-utility field, to an industry with a high capital turnover provides a dangerously narrow margin of safety; (2) where earnings are controlled by the rate-of-return method, the industry with the higher capital turnover is less able to meet adverse changes in either revenues or expenses. It should be obvious, therefore, that that method of earnings-control is an extremely risky one for an industry characterized, as is the airline industry, by a high capital turnover, coupled with instability of both revenues and expenses.

Table 3 which follows shows the relationship between different operating ratios and rates of return on investment in the airline industry. It indicates as well as figures can the importance of stabilizing the operating ratio, so far as possible.
### TABLE 3

COMPARISON OF DOMESTIC AIR TRUNKLINE PROFITS UNDER RATE OF RETURN AND OPERATING RATIO YARDSTICK

<table>
<thead>
<tr>
<th>Year</th>
<th>Operating Revenues (000)</th>
<th>Operating Expenses (000)</th>
<th>Operating Income (Before Taxes) (000)</th>
<th>Operating Ratio</th>
<th>Operating Ratio After Tax</th>
<th>Invested Capital (000)</th>
<th>Return on Invested Capital—85% Operating Ratio</th>
<th>Return on Invested Capital—90% Operating Ratio</th>
<th>Return on Invested Capital—95% Operating Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1939</td>
<td>$55,527</td>
<td>$50,940</td>
<td>$4,587</td>
<td>91.7%</td>
<td>93.2%</td>
<td>$35,766</td>
<td>10.6%</td>
<td>19.2%</td>
<td>12.8%</td>
</tr>
<tr>
<td>1940</td>
<td>76,109</td>
<td>70,194</td>
<td>5,915</td>
<td>92.2%</td>
<td>94.1%</td>
<td>54,451</td>
<td>8.2</td>
<td>15.8</td>
<td>10.5</td>
</tr>
<tr>
<td>1941</td>
<td>96,082</td>
<td>88,789</td>
<td>7,293</td>
<td>92.4%</td>
<td>95.1%</td>
<td>61,868</td>
<td>7.6</td>
<td>15.0</td>
<td>10.0</td>
</tr>
<tr>
<td>1942</td>
<td>106,310</td>
<td>89,329</td>
<td>25,981</td>
<td>75.6%</td>
<td>85.8%</td>
<td>76,844</td>
<td>19.6</td>
<td>12.0</td>
<td>8.8</td>
</tr>
<tr>
<td>1943</td>
<td>120,617</td>
<td>93,642</td>
<td>26,975</td>
<td>77.6%</td>
<td>89.2%</td>
<td>95,696</td>
<td>13.7</td>
<td>9.2</td>
<td>6.1</td>
</tr>
<tr>
<td>1944</td>
<td>158,447</td>
<td>122,353</td>
<td>36,094</td>
<td>77.2%</td>
<td>88.5%</td>
<td>126,915</td>
<td>14.3</td>
<td>9.4</td>
<td>6.3</td>
</tr>
<tr>
<td>1945</td>
<td>211,125</td>
<td>177,673</td>
<td>33,452</td>
<td>84.2%</td>
<td>92.2%</td>
<td>168,027</td>
<td>10.0</td>
<td>9.5</td>
<td>6.3</td>
</tr>
<tr>
<td>1946</td>
<td>329,872</td>
<td>339,932</td>
<td>(10,060)</td>
<td>103.0%</td>
<td>103.2%</td>
<td>270,744</td>
<td>(3.9)%</td>
<td>10.9</td>
<td>7.3</td>
</tr>
<tr>
<td>1947</td>
<td>397,443</td>
<td>420,883</td>
<td>(23,440)</td>
<td>105.9%</td>
<td>107.5%</td>
<td>333,385</td>
<td>(8.9)%</td>
<td>10.7</td>
<td>7.2</td>
</tr>
<tr>
<td>1948</td>
<td>478,076</td>
<td>473,105</td>
<td>4,971</td>
<td>99.0%</td>
<td>99.7%</td>
<td>368,457</td>
<td>0.4</td>
<td>10.9</td>
<td>7.3</td>
</tr>
<tr>
<td>1949</td>
<td>534,708</td>
<td>501,982</td>
<td>32,726</td>
<td>93.9%</td>
<td>95.3%</td>
<td>372,154</td>
<td>6.7</td>
<td>16.4</td>
<td>11.0</td>
</tr>
<tr>
<td>1950</td>
<td>607,597</td>
<td>536,123</td>
<td>71,474</td>
<td>88.5%</td>
<td>93.4%</td>
<td>391,132</td>
<td>10.3</td>
<td>13.4</td>
<td>9.0</td>
</tr>
<tr>
<td>1951</td>
<td>757,701</td>
<td>645,737</td>
<td>111,964</td>
<td>85.2%</td>
<td>93.7%</td>
<td>422,277</td>
<td>11.2</td>
<td>11.3</td>
<td>7.6</td>
</tr>
<tr>
<td>1952</td>
<td>872,590</td>
<td>774,893</td>
<td>97,997</td>
<td>88.8%</td>
<td>94.2%</td>
<td>536,954</td>
<td>9.4</td>
<td>12.6</td>
<td>8.5</td>
</tr>
</tbody>
</table>

**Source:** CAB Annual Statistics and Recurrent Financial Reports.

1 Includes international operations of domestic trunks.

2 Percent operating expenses plus income taxes of operating revenues.

3 Long-term debt plus net worth.

4 Percent operating profit after tax to invested capital.

5 Operating income less estimated income taxes as a percent of invested capital. All operating incomes are calculated before taxes.
Reduction in Rate Determination Lag. A second important advantage of the operating ratio is that it will speed up and simplify the rate-making process. As time goes on, the application of the rate-of-return theory to the airlines will become more complicated and more costly. More and more time will be devoted to valuation of the assets and determination of the rate base. A sharp reversal in the economic trend would almost certainly precipitate these problems into airline rate cases.

The ease of applying the operating ratio as a method of establishing profits is clear. Through the system of uniform accounts and annual reports now in effect, such as the Form 41 and other reports prescribed by the Board, significant averages can be worked out so that after some experimentation and research the Board can tell whether a particular airline or group of airlines is healthy or financially ill.

Conclusion

As applied to the older types of regulated industries — railroads, gas and electric companies, etc. — the rate-of-return-on-investment method of measuring earnings and fixing rates may be essentially fair and reasonably adequate. As applied to the airline industry, however, that method has serious shortcomings. For an industry with a high capital-turnover rate and volatile revenues and expenses, the operating ratio is a more significant and a more reliable measure — and one which has not received the attention due it. If the airline industry is to withstand the economic shocks which must inevitably be felt — if it is to acquire on reasonable terms the capital which will be needed to finance the tremendously costly expansion which is just ahead, the soundest possible method of regulating its rates and measuring its earnings must be devised. The operating ratio merits serious examination — at least as a step in that direction.