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Some Aspects of Airline Accounting

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Washington, D. C.

Airlines engaged in interstate air transportation, overseas or foreign air commerce, operate under the provisions of the Civil Aeronautics Act of 1938, and the rules and regulations of the Civil Aeronautics Board promulgated thereunder. Under the economic provisions of the Act, air carriers must obtain from the Civil Aeronautics Board a certificate of public convenience and necessity before engaging in air transportation over any particular route. Certificates are issued only after formal application has been made to the Board and after a public hearing has been held. When issued, the certificate generally authorizes the carrier to engage in air transportation with respect to persons, property, and mail between certain terminal and intermediate points designated in the certificate. However, there have been a number of certificates issued authorizing the transportation of persons and property only, and others limiting authorization to the transportation of mail.

In general, air transportation in the United States and between the United States and foreign countries is carried on by corporations organized under the laws of the various states. However, the Board has the authority to issue permits to foreign air carriers who wish to carry on foreign air commerce between the United States and any other country. These permits are similar to the certificates of public convenience and necessity, and the same type of formal application must be made in order to procure one. Only a few such permits have been issued.

Nature of Business: The powers of airline corporations as set forth in the certificate of incorporation are ordinarily very broad and of a general nature. Specific powers usually include the right to contract for the air transportation of passengers, express and/or mail, to manufacture, buy, sell or deal in aircraft and aircraft equipment, and to train and instruct pilots. Under the specific powers airlines conduct charter and special flights, and the larger airlines maintain work shops and hangars where repairs and maintenance work is done on aircraft owned by smaller air carriers and by private individuals.

Organizations: The Civil Aeronautics Act requires that the president and at least two-thirds of the directors and managing officers of any corporation engaged in air transportation be citizens of the United States, and at least seventy-five per cent of the voting stock of the corporation must be owned or controlled by citizens of the United States. However, railroads, steamship companies and motor carriers are limited in their participation in the stock of air carriers. The Civil Aeronautics Board held in the petition of American Export Airlines, Inc. that the language of the Act of 1938 "rigidly limits participation of the older forms of transportation in the air transport field." Under the provisions of Section 408 of the Act, approval must be obtained from the Board before a controlling interest may be acquired by "any other common carrier." The Board will grant approval only when the air service is an integral part of the operation of the other common carrier, and does not constitute an alternate means of transportation to the common carrier from point of origin to destination.

The organization of a corporation engaged in air transportation is broken down into three functional divisions—the traffic and sales division, the operations and maintenance division, and the treasury division. The traffic and sales division, which is usually under the immediate supervision of a vice president of the corporation, has entire responsibility for the solicitation of traffic, the handling of passengers, the managing of air mail and express, inter-line relations and all public relations, including advertising and publicity.

The operations and maintenance division is also under the supervision of a vice president. This division is the major functional division of the company and may be divided into two subdivisions. A superintendent of operations is in charge of one subdivision, called the operations department. He is responsible for both flights and ground operations. The other subdivision, called the engineering and maintenance department, is under the supervision of a chief engineer, who is responsible for both overhauling and line maintenance.

The treasury department is under the supervision of a treasurer who, in the small organizations, acts as the comptroller. The treasury division handles all matters pertaining to the collection of revenue and the payment of expenses. Work in this division is broken down according to functions and assigned to sections. The most important section is the general accounting section. It is the responsibility of this section to keep the general ledger and the general journal, and to prepare the monthly balance sheet and profit and loss statement. Also, the general accounting section checks the accounting and statistical data prepared by other section of the treasury division and ties in such data with the accounting books and records of the company.

Because of its importance, the function of accounting for revenue is handled by a separate section and the work is divided into inter-line refund and ticket auditing. There is also a property section that maintains detail property records, as the largest portion of an airline's assets consisting of aircraft and equipment. Another section of importance in the treasury division is the statistical section. Data complied by this section throws light on the cost of maintenance and operations and are used for comparative purposes by the Civil Aeronautics Board and the Air Transport Association.

Regulation of the accounts, records, and reports: Under the provisions of section 407 (d) of the Civil Aeronautics Act of 1938, the Civil Aeronautics Board is empowered "to prescribe the accounts, records, and memoranda to be kept by air carriers." By virtue of this authority, the Board adopted the Uniform System of Accounts for Carriers by Air, originally prescribed by the United States Post Office Department in 1930. As it became apparent that radical revision was needed in the classification of accounts, the Board, in January 1942, issued its first accounting manual entitled, Uniform System of Accounts for Domestic Air Carriers. Constant revision of the manual has necessitated its publication in loose-leaf form, which facilitates the incorporation of all current changes in their proper places.

The Civil Aeronautics Board requires that monthly Reports of Financing and Operating Statistics be filed on CAB Form 2780. Information shown on the various schedules comprising the report is in detail and the data contained therein enable the Board to supervise closely the financial operations of air carriers to determine the efficiency of their management, and to require timely correction of any accounting matter the Board deems necessary. From the statistical information in the report, the Board compiles a great deal of data which are frequently used as basis for legislative recommendations to Congress. CAB Form 2780 requires the submission by the airlines of the following schedules:

Schedule 1—Balance Sheet
Schedule 3(a)—Statement of Profit and Loss
Schedule 3(b)—Statement of Operating Revenues
Schedule 4(a)—Statement of Aircraft Operating Expenses
Schedule 4(b)—Statement of Ground and Indirect Expenses
Schedule 4(c)—Statement of Station Expenses
Schedule 6—Operating Property and Equipment
Schedule 7—Retirements of Operating Property
Schedule 8—Aircraft and Aircraft Engines Acquired and Retired
Schedule 9—Analysis of Extension and Development Accounts
Schedule 12(a)—Traffic Report by Routes
Schedule 12(b)—Traffic Report by Routes
Schedule 13—Aircraft Miles Flown and Engine Hours Flown
Schedule 14(a)—Aircraft Utilization by Types of Aircraft—Monthly
Schedule 14(b)—Aircraft Utilization by Types of Aircraft—Quarterly
Schedule 15—Statement of Flight Equipment Spare Parts and Assemblies

The classification of accounts as set forth in the Manual is divided into four main groups: (1) balance sheet accounts; (2) operating revenue accounts; (3) operating expense accounts; and (4) income accounts. In a brief article such as this it is not possible to discuss these various classifications in detail. Therefore, only those accounts of particular importance are described.

Depreciation: The nature of the assets of an air carrier are not unusual and present no unique accounting feature. By far the largest asset items are the investment in aircraft and equipment, which, because of the revolutionary developments in aviation, are subject to rapid obsolescence. The loss in service value due to obsolescence is recognized as a current operating expense. In the broad definition of depreciation given in the Uniform System of Accounts, depreciation is defined as "losses occurring in physical property, either temporary or permanent, suffered through current lessening in service value due to wear and tear from use and the action of time and the elements, which are not replaced by current repairs; also, the losses in capacity for use or service occasioned by obsolescence, supercession, discoveries, change in popular demand, or the requirements of public authority."

It should be noted that this definition of depreciation includes both temporary and permanent losses in service value. The Manual does not state what is meant by a temporary loss but apparently this term represents the loss in value which may be replaced at a later date through repairs or renewals. This type of loss is generally known in accounting as "deferred maintenance."

One of the unusual features in the treatment of depreciation for air carriers is the requirement that depreciation start on the date the asset is *placed in revenue service* and "ceases on the date such property is *withdrawn from service.*"

The depreciation rates vary with the class of equipment. The following rates, although not standard throughout the industry, have been used by a few air carriers in the past:

	Estimated Useful Life Years	Rate Per Annum Per Cent
Flying Equipment*	5	20
Passenger Service Equipment	5	20
Station Radio Equipment	5	20
Shop Equipment	8	12½
Motorized Vehicles	4	25
Furniture and Fixtures	15	6⅔
Engineering Equipment	15	6⅔
Airport and Airway Lighting	3	33⅓
Fuel Storage Equipment	7	14.3
Miscellaneous Ground Equipment	10	10
Buildings and Improvements on Land not Owned	10	10
Improvements on Leased Property	3	33⅓

*20 Per Cent Residual Value on Hulls and Engines only.

Most of the aircraft and equipment now in use have been in operation more than five years and air carriers are beginning to consider the advisability of writing off the residual value, as engineers believe the equipment will have little resale value when new aircraft are available. The Manual provides that adjustment or revision in depreciation rates, or residual values, shall not be made retroactively but shall affect only subsequent accounting periods. Usually planes are depreciated on a unit basis. However, air carriers having in operation ten or more planes may at their option depreciate them on a group basis.

Inventories: Inventories of an airline may be classified as of two kinds: (1) materials and supplies of an expendable nature, which may be used interchangeably on various types of equipment; and (2) spare parts, instruments, and assemblies which may be used only on special types of flight equipment. Items of the latter type are not classified as a part of inventory in the usual accounting concept of the term. These items are really extra equipment of a fixed nature which an airline keeps on hand in case of emergency.

As soon as an inventory item is withdrawn from stock, it is expensed and charged to the job of work order. If there is a recovery of reusable items in connection with maintenance or construction jobs, such items are set up in inventory at a fair and reasonable value and the job or work order credited. The policy of airlines varies at to what constitutes a fair and reasonable value to give to the recoverable parts. Reusable spare parts, and assemblies which may be used only on special types of flight equipment, are sometimes included in inventory at their original cost and the loss in service value taken care of through a reserve account. Since it is possible to determine the estimated life of the flight equipment to which these spare parts relate, the expense of obsolescence is computed by estimating the inventory on hand at the date of retirement of the flight equipment, deducting the residual value and accruing through equal monthly charges to obsolescence expense, the amount of loss thus determined.

Receivables: Although not an important item on the balance sheet, "air travel plan contract receivables" are unique to air carriers. Frequently, air carriers enter into air travel contracts with individuals or businesses wishing to subscribe for such service. An individual or firm having a good credit rating may deposit with an air carrier a sum of money (traffic regulations now provide for a deposit of $425) and designate a certain person or persons who have the authority to pledge the credit of depositor for passenger fares. When received, these deposits are set up in a liability account—"Air Travel Plan Liability"—and the designated person or persons are issued travel cards. On the presentation of proper identification to any air carrier, those persons designated by the depositor or subscriber are issued passenger tickets.

At the end of the month, the air carrier bills its own depositors for the total amount of tickets issued over its routes, and over the routes of any other airline. The deposit, however, is kept intact until the contract agreement with the depositor is canceled and the travel card of the depositor returned to the airline for cancellation.

Liabilities: The liability and net worth accounts of an airline do not differ from those found in general commercial businesses. From an accounting viewpoint, the most unusual accounts are the reserves for aircraft and engine overhaul and the deferred credit for unearned transportation revenue.

Since the Safety Bureau of the Civil Aeronautics Board requires periodic overhaul of all aircraft and engines, airlines sometimes set up reserves for aircraft overhaul and reserves for engine overhaul to cover this expense. These reserves are accumulated through uniform charges to operating expense and the actual costs of such overhauls are charged against the reserve thus created. The use of these operating reserves affords an air carrier the benefit of equalizing the overhaul expenses throughout the year.

The deferred credit account for unearned transportation revenue is set up to cover the value of passenger tickets over the carrier's own line which have not been used or refunded as of the date of the balance sheet. Through the use of this account the passenger revenue account always reflects income from passenger service actually rendered.

Income: The operating revenue of an airline is derived from passenger fares, mail, express and freight, excess baggage, charter and special flights. Revenue is also obtained from incidental services such as repairs and overhaul service for others.

In the larger domestically operated airlines, from sixty-five to eighty per cent of the operating revenue is obtained from the sale of passenger tickets. The accounting for this income involves an intimate knowledge of the procedural steps necessary to account for all tickets and to record the earned revenue.

The peculiarities found in accounting for income from passenger fares for an air carrier are, in general, the same as those encountered in other forms of interstate carrier service. These peculiarities are due primarily to the various ways in which tickets may be purchased and to the reciprocal agreements between the air carriers whereby tickets are purchased from one company while actual transportation is provided by another.

Tickets may be purchased through the use of cash or credit as provided in the air travel plan, or through the use of United States Government requests, or by an exchange order or issue wire from an authorized agency or carrier.

The original supporting document for the recording of income from passenger fares or excess baggage is the Ticket Agent's Report. This report is executed daily and mailed to the treasury department of the airline. The report covers every ticket issued and shows all the information necessary for the revenue section of the treasury department to properly record the income from the transportation of persons. Each daily Ticket Agent's Report must be audited and analyzed before a compilation of total income can be obtained. When the volume of work warrants it, business machines are used to compile the totals after the Ticket Agent's Reports have been audited.

The supporting record for the recording of air mail revenue is the United States Post Office Form 2702. On this form is shown the weight of each pouch of mail carried and an authorized employee of the Post Office Department must certify to the correctness of the weight before the Department will accept liability for payment of the service rendered. The air mail revenue is computed monthly from the data shown on Form 2702. At the same time the income is recorded, the receivable due from the United States Government is set up.

Expenses: The operating expense accounts of an airline are broken down into nine major functional groups—flying operations, ground operations, flight equipment maintenance-direct, equipment maintenance-indirect, passenger service, traffic and sales, advertising and publicity, general and administrative, and depreciation. These major functional groups are further subdivided into 184 primary accounts. This breakdown with cost data which are of invaluable aid in controlling expenditures.

Whenever possible, expenses are charged directly to the account in the functional group to which they apply. Indirect costs such as heat and power, rent, insurance, etc., are allocated to the functional group accounts on a prorated basis. However, depreciation or general and administrative costs are not apportioned, but are considered merely as operating expenses. Jobs or work orders are charged only with direct material and labor costs, and there is no absorption of overhead expenses through the work-in-progress account.

Non-operating income and deductions: The non-operating income, and deductions from gross income, include those items which show the net income from miscellaneous sources such as the profit or loss from the sale of physical property, cash discounts, etc. These amounts are relatively unimportant, but must be considered in order to arrive at the net income of the air carrier.

Conclusion: In a brief treatise of this nature, it is not possible to discuss every phase of airline accounting. Therefore, only those accounts have been discussed which are primarily characteristic of the air transportation business, or are considered unusual. The problems which arise in airline accounting cannot always be solved in the light of the past experience of other types of common carriers. Both vision and courage are needed to find the answer to many questions in this newest of all fields of transportation—the air.

What's New in Reading

HELEN M. HETH, *Detroit, Michigan*

TERMINATION FINANCING AS PRESENTED IN CURRENT PERIODICALS

The annual convention of the American Bankers' Association was held in Chicago in October and no small part of their meeting was devoted to the bank's part in the reconversion program of the nation. The Credit Policy Commission of the Association has published a booklet, *Contract Termination Loans,* which presents complete information on T loans. This may be secured at your local bank.

Business Week for November 18, 1944, in a very brief article called "Loan Pool Grows," states that 60% of the nation's business organizations have net worths of $3,000 or less and 5% have net worths of more than