DETERMINATION OF ACQUISITION AND FIELD SUPERVISION COST BY LINES OF BUSINESS FOR CASUALTY INSURANCE

BY

THOMAS F. TARBELL

The adoption by the leading Stock Casualty Companies of rules regulating Acquisition and Field Supervision Cost which became effective in the early part of 1923*, and the consequent adoption by the Insurance Department of the State of New York of a new exhibit or statement designated as the "New York Casualty Experience Exhibit," has recently emphasized the importance of the subject of this paper.

The requirements of the Casualty Experience Exhibit referred to are familiar to most of the members of this Society, but for the benefit of those whose particular line of endeavor has not brought them in contact with this exhibit, I will state briefly the information called for.

The exhibit contains four parts:

Part I is an exhibit of a Company's Underwriting Results by lines of business on the incurred basis. It is substantially the same as the Underwriting Exhibit contained in the Convention Annual Statement Blank except that it calls for Underwriting Results by lines of business.

Part II is an exhibit of Premiums Earned, Commissions Incurred and Field Supervision Expense Incurred by lines of business. This exhibit is based upon direct business only, all reinsurance transactions either assumed or ceded being eliminated.

Part III is an exhibit of Premiums Earned and Losses Incurred on New York State risks on the Calendar Year basis for the past five years by lines of business.

Part IV is an exhibit of New York Compensation experience for the same period on a Policy Year basis. This last exhibit supersedes New York Schedule W.

NOTE: (*) See paper entitled "Rules Regarding Acquisition and Field Supervision Cost for Casualty Business", by G. F. Michelbacher, *Proceedings*, Vol. IX, Part II, Page 242.

The present paper is limited to a consideration of methods of determining Field Supervision Cost as called for by Part II of the Exhibit. The problem of the proper separation of all expense items entering into the Underwriting Results as required by Part I of the exhibit is of considerable importance but the general question of separation of administrative expense has received a good share of attention in our Proceedings recently and is therefore not treated specifically, although it is obvious that methods suggested as offering a solution to the problems of Part II will, in many instances, apply equally as well to the problems of Part I.

At the outset it should be recognized that the problem is to a considerable degree an individual one with each company. This is so because of differences in organization, operation and functions performed by Branch Offices; also because of different accounting methods. Consequently no set rules can be laid down which will apply without modification to all companies. For companies operating on the General Agency plan, the problem is comparatively simple as the total Production Cost consists, in most instances, of the Commissions paid the General Agent. It is a different proposition, however, in case of companies operating upon the Branch Office plan or the Direct Reporting Agency plan. Concerning the problem of companies operating on the Branch Office plan, it is necessary to give due consideration to the functions of the Branch Office, whether the Branch Office is engaged purely in business getting or performs in addition certain Home Office functions, foreign to Field Supervision, such as Accounting, Claim, Inspection and Payroll Audit.

For the purpose of this paper it is assumed that a company is operating on the Branch Office plan and that the Branch Office embraces both Field Supervision and Home Office functions. Further, it is assumed that the Branch Office, is, or may be divided into departments.

Commissions are not considered as the determination of this portion of Production Cost presents no material difficulties.

At this point it is appropriate to state that in the actual problem of determining Field Supervision Cost by lines of business, it seems essential that each Branch Office should be considered as a unit. This is for the reason that Branch Offices of the same company will vary considerably in certain details of organization and operation.

The departments assumed to be embraced in the Branch Office organizations are:

1. Underwriting
2. Policy Writing
3. Accounting
4. Payroll Audit
5. Claim
6. Inspection
7. Administration
8. General

Underwriting Departments are composed of all employees, other than those assigned to Administrative Department, hereinafter referred to, engaged in the actual production of business and the details of Branch Office underwriting. It is assumed that Underwriting Departments are more or less distinct units, *viz*: Accident and Health; Liability (including Compensation but excluding Automobile Liability); Automobile (all coverages); Burglary; Plate Glass, etc., although this condition will not always obtain in a small office.

Administrative Department embraces in its personnel the Manager, the Assistant Manager, if any, the Manager's and Assistant Manager's personal stenographers.

General Department† consists of Office Boys, Mail Clerks and any clerical employees whose duties are of a miscellaneous or general nature.

The other departments require no particular comments.

The various steps in the process of allocation of Field Supervision Cost by lines of business are:

First: Separation of Expenses by Accounts
Second: Allocation by Departments.
Third: Allocation by Line of Business.
Fourth: Division of Expense between Field Supervision and Non-Production Costs.

The separation of expenses by account presents no difficulty as such a separation is required for Annual Statement purposes and Ledger Accounts are maintained for all the various kinds of expense required.

In dealing with Field Supervision Cost, we are not required to use all accounts entering into the expense of a Branch Office as

NOTE: (†) This is not strictly speaking a Department but rather a collection of miscellaneous employees.

the Acquisition Cost Rules previously referred to define Field Supervision Cost thus:

"Field Supervision Cost shall mean the entire cost of conducting a General Agency or Branch Office. It shall include all commissions (except Acquisition Cost) all salaries, allowances, bonuses, prizes, rewards, rent and other items of expense incident to the conduct of such an agency or office, hereinafter specifically defined, but shall not include expenditures for taxes and governmental impositions, or expenditures actually made in good faith for the adjustment of claims, the making of inspections and payroll audits.

"Field Supervision Cost shall specifically include the following items:

1. Remuneration to General Agents, Branch Office Managers, Assistant Managers and Salaried Special Agents.
2. Traveling expenses of General Agents, Branch Office Managers, Assistant Managers and Salaried Special Agents.
3. The cost of policy-writing in Agencies and Branch Offices.
4. The cost of collection of premiums in Agencies and Branch Offices.
5. Rent, heat, light and maintenance of Agencies and Branch Offices.
6. Remuneration of clerical office force in Agencies and Branch Offices.
7. Exchange, advertising, postage, telephone, telegraph and express in Agencies and Branch Offices."

Therefore it appears that the accounts generally involved will be:

Salaries
Traveling
Rent
General Office Maintenance and Expense
Advertising
Printing and Stationery
Postage
Telephone and Telegraph
Exchange
Express
Furniture and Fixtures
Entertainment of Agents

There is some question as to the propriety or necessity of including Printing and Stationery and Furniture and Fixtures as a part of Field Supervision Cost. However, it is assumed for the purposes of illustrating methods of distribution of expense that such accounts are included.

The sequence indicated above for breaking up and assigning items of expense, first allocating by departments and then by lines of business, is for general guidance and not a fixed rule. Wherever an item of expense can be allocated directly to a single line of business such direct allocation should be made, but the identification of such items by departments should be preserved for reasons to be hereinafter explained. That the larger the percentage of expense items allocated directly to lines of business the greater the degree of accuracy obtained, requires no proof.

Taking up the various accounts mentioned above, the following suggestions are offered with respect to each for allocation of expenses by departments (or lines, where direct allocation to lines can be made):

Salaries: Charge each employee's salary to the department (or line) in which that person is employed. If an employee's duties involve two or more departments, make a division based on the time spent in each department. Such a division of time spent should be based upon a time test covering a sufficient period to give substantially accurate results and with due regard to seasonal variations among the various lines. The basis of division should also be tested periodically, at least quarterly, and the percentages revised.

Traveling: Traveling expense should be allocated on the same basis as Salaries, charging the expense to the department (or line) in which the employee incurring the expense is engaged.

Rents: The allocation of Rents should be based upon the floor area (in square feet) occupied by the various departments and accurate measurements should be made. Ratios should be revised each time space is vacated or additional space occupied.

General Office Maintenance and Expense: This account includes gas, electric light service, water, ice, janitor's salary and supplies, soap, towels, cleaning, etc. The allocation of this expense presents some difficulty but it seems entirely reasonable to allocate it between departments by using the percentages developed for allocation of rent.

Advertising: It is difficult to lay down any general rules for the allocation of this item for the reason that advertising practice and policy will vary materially in the various companies. This expense will usually be charged against Underwriting Departments and will apply: to individual lines, to departments, or to all lines. Expense items chargeable to individual lines should be so allocated, that chargeable to departments should be allocated to individual lines on the basis of the premium volume ratios for the lines affected and that chargeable to all lines should be allocated to the individual lines on the basis of the premium volume ratios for all lines.

Printing and Stationery: So far as possible, allocate each item of expense to the department or line of business incurring the expense. Allocate the balance of such expense to departments on the basis of the ratios of the number of employees in each department to the total number of employees in the office.

Postage: This relatively unimportant item is unquestionably a difficult one to deal with on an equitable basis. The writer suggests that the expense be allocated to departments on ratios determined by a tally of outgoing mail items (letters, notices, bills, etc.) by departments over a period of one month or more. In making such tally, however, all bills or premium notices sent out by the Accounting Department should be charged to the respective Underwriting Departments having jurisdiction over the line or lines of business. Unless the period selected is a normal one, a certain amount of weighting will be necessary to eliminate the effect of seasonal variations in some of the lines.

Telephone and Telegraph: Telephone service should be allocated to departments on the ratios of the number of desk 'phones in each department to the total number of desk 'phones. Long distance and toll line calls and telegrams should be charged to the department incurring the expense.

Exchange: This account will usually represent only exchange on checks and drafts. It should be charged to Accounting Department.

Express: This account will include express, freight, cartage and moving. Items should be charged wherever possible to the department incurring the expense. If the item is of a general nature and applies indirectly to all departments, allocate to departments using the ratios of the number of employees of each department to the total number of employees.

Furniture and Fixtures: The difficulties encountered in making a reasonable allocation of this class of expense have been clearly brought out in previous papers presented to the Society and are generally recognized. In case of allocating Branch Office expense the difficulties are not of such consequence as in case of Home Office expense for the reason that in a smaller unit such as the Branch Office there is not an appreciable amount of shifting of furniture between departments. The following general rules would appear to be reasonable: charge items wherever possible to the departments for which the furniture, fixtures, etc., are purchased. Equipment purchased for Managers, Assistant Managers, if any, and their Stenographers should be charged to Administrative Department. That purchased for Office Boys and other miscellaneous clerical employees should be charged to General Department. Articles purchased for general use, apportion charge to departments using the ratios of the number of employees of each department to the total number of employees

Entertainment of Agents: This is an Underwriting Department expense and should be charged to specific departments or to all lines depending upon whether the Agents on account of whom the expense is incurred represent the lines of a certain department, or departments, or all lines. The expense should be allocated to individual lines on a premium volume basis.

If the allocation is carried out along the lines above indicated, we will have expenses segregated by departments, each department's expense falling into two sub-divisions:

a. Department expense allocated to specific lines and/or
b. Department expense not allocated.

The next step in the allocation is the separation of the unallocated department expenses by lines.* Departments involving Field Supervision Cost in whole or in part only need be considered. These are as follows:

Underwriting
Policy Writing
Accounting
Administrative
General.

Underwriting Departments: These departments will be individual line (such as Burglary and Plate Glass) or multiple line

NOTE: (*) In actual practice both steps in the process of allocation will be made at the same time.

(such as Accident and Health, Liability and Compensation, Automobile, Fidelty and Surety, etc.).

In case of a single line Underwriting Department, no further allocation is necessary as the allocation by department automatically produces the allocation by line. In separating expenses by lines for the multiple line Underwriting Departments as well as for the Non-Underwriting Departments, it is desirable, if possible to adopt a uniform method as the greater the number of formulae and refinements the greater the accounting expense in connection with the allocation. The simplest and least expensive method is according to premium volume. This method has been severely condemned by all writers on the subject of allocation of Home Office, or Administrative, expense and the objections that make it unsuitable for this purpose apply to some extent in considering its adaptability to the allocation of Branch Office expense. The conditions are, however, somewhat different. In case of Branch Office expense, the effort and expense in obtaining the business is unquestionably to some degree proportional to the premium involved—this is best illustrated by the direct compensation to the producing agent in the form of commission. It seems reasonable therefore to give some weight to premium volume in making the line of business allocation. There are, however, certain clerical operations not materially affected by the amount of premium and which, as respects the line of business involved, vary according to the number of items handled or according to the number of items handled weighted to give effect to differences in time cost.

If it were possible to really determine what proportion of the expense was to be distributed by lines according to premium volume and what proportion according to items handled, the problem would be considerably simplified. However, such a separation is not practicable. Further, the determining of relative cost of handling items is attended with many intricate problems, such as the case of Public Liability written concurrently with Compensation or Employers Liability and Automobile policies involving Liability (the basic coverage), Property Damage and Collision. The correct solution of such intricate problems, if attainable, would unquestionably involve a prohibitive amount of expense. It is therefore necessary to make a more or less arbitrary assumption and that suggested by the writer is to assume that the relative cost of Underwriting Department expense between lines will be fairly distributed on the basis of the mean ratios of premium volume and risks handled, treating each coverage (in policies involving more than one coverage) as a separate risk. This basis has been tested out and found to produce results that appear reasonable.

Non-Underwriting Departments: The writer also believes that the last mentioned basis can be followed in distributing the Non-Underwriting departments (Policy Writing, Accounting, Administrative and General†) expense, with satisfactory results. In case of Policy Writing, the best method of allocation by lines is undoubtedly one based upon the relative time cost of writing the various forms of policies, but it is believed that the results obtained by this method would not vary to any great extent from the results obtained by the basis suggested and would not affect the approximate correctness of the total Branch Office expense by lines, particularly as the total Policy Writing Department expense forms only a small percentage of the total expense. The advantage of applying a uniform method of allocation of both Underwriting and Non-Underwriting departments expense by lines will justify the adoption of the most practical rather than the most theoretically correct method where the results obtained will differ to no material extent.

When the allocation of expense has been completed by departments and by lines, for the accounts considered, the final step is the determining of how much of the expense falls under Field Supervision Cost and how much under non-production cost. The conditions of the problem, as pointed out previously in this paper, will vary with different companies and accordingly any discussion must be along broad and general lines.

The various departments are considered in order:

Underwriting Departments: In general the total cost of each Underwriting Department will be chargeable to Field Supervision. There is a tendency, however, in companies operating Branch Offices in large cities to transfer Home Office Underwriting functions for certain lines, particularly Automobile, to the Branch and place a Home Office Underwriter in the Branch. Where this condition exists, due allowance should be made in determining

NOTE: (†) The method obviously does not apply to such departments as Payroll Audit Claim and Inspection.

Field Supervision Cost and it is suggested that an equitable basis of splitting the cost would be to compute the ratio of the salary of the Home Office Underwriter to the total salaries of the department and apply the resulting percentage to the total amount of the expense for the accounts considered. The product thus determined produces the non-production cost portion and the balance constitutes the Field Supervision Cost portion.

Policy Writing Department: The total cost of the Policy Writing Department should be charged to Field Supervision.

Accounting Department: The proper allocation of the expense of this department between Field Supervision and non-production expense requires careful study. In nearly every Branch Office certain Home Office accounting functions will be performed and it is necessary to make a separation which will reflect approximately the proper proportions of Field Supervision and non-production expense. The method suggested by the writer is briefly as follows: First analyze the duties of each employee to determine how many clerks or what proportion of a clerk each operation (Cash Book, Paid Premium Reports, Written Premium Journal, Paid Premium Journal, Agents Ledger, Collections, Billing, etc.) requires; second, analyze each operation to determine whether it is a Field Supervision or non-production cost operation; third, find the ratios of the number of Field Supervision cost operation clerks and the number of non-production operation clerks to the total number of clerks. These ratios furnish the basis of splitting the total department expense between Field Supervision and non-production costs.

In lieu of using the number (or fractional parts) of clerks, a salary cost basis might be employed. Such a basis would probably produce somewhat more accurate results but is more dfficult to operate as salaries change more rapidly than the number, or duties, of employees. The ratios should be revised at rather frequent intervals, preferably quarterly but at least semi-annually.

In analyzing to determine which are Field Supervision operations and which are non-production, or Home Office, operations, it will be of assistance in properly placing some of the doubtful operations to consider whether or not a General Agent would be subject to the expense of the particular operation. If the answer is in the affirmative, the operation is a Field Supervision one.

Administrative Department: If the time of the Manager is entirely devoted to business producing efforts, the total expenses of this department should be charged to Field Supervision Cost. If, however, the Manager devotes only a part of his time to business producing and spends the balance in supervising the general operations of all departments of the Branch Office, only a part of the total expense should be charged to Field Supervision Cost. To determine the proportions of cost to be charged to Field Supervision and non-production, time tests should be made extending over a period of one month or more. The best method is to have the Manager indicate on a small card at the end of each day the approximate number of hours devoted to business producing and general administrative duties respectively. At the end of the period, the data is drawn off the cards and the percentages computed.

General Department: The total expense incurred by this Department (or Group) will be relatively small. It is suggested that the separation of the expense between Field Supervision and non-production cost be made as follows: Combine the total Field Supervision Expense for all departments mentioned above, also combine the total non-production expense for the above departments and for all other departments embraced in the Branch Office except General Department. Determine the ratios of each expense (Field Supervision and non-production) to the total expense and use these ratios to separate the General Department expense.

Conclusion

The subject of expense allocation by lines of business, particularly as it affects multiple line Casualty Companies involves many perplexing problems for the reason that this business does not readily lend itself to accurate cost finding by lines. Due to differences in organization and administration the problems encountered in the various companies are not identical and their solution is, to a considerable degree, an individual matter with each company. While some progress has been made, there is still much ground to be covered.

We have had some valuable and constructive papers on the general subject of Casualty Insurance Expense Allocation presented to our Society, but to date very little has been written on the subject of the separation of Branch Office expenses between Field Supervision and non-production costs. The writer feels that the importance of this feature of insurance accounting justifies his pioneering efforts. He appreciates that the suggestions and recommendations offered are not as comprehensive as could be desired. He is hopeful, however, that his suggestions and recommendations will encourage further thought and discussion on the part of those interested and result in worthwhile contributions toward the solution of the many problems involved.

Some of the methods suggested have been tried out in practice, others are purely theoretical and have not as yet been put to the test.

A natural criticism of the writer's suggestions and recommendations is the amount of labor involved in arriving at the results. On this point, the writer feels most strongly that any system of expense allocation by lines of business and separation of Field Supervision and non-production expense intended to produce substantially accurate results must, in the case of a multiple line Casualty Company, involve a very considerable amount of labor and expense.