

ALLOCATION OF EXPENSES

BY

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Under date of October 4th, 1923, the Insurance Department of the State of New York addressed a letter to various insurance companies enclosing a preliminary draft of an exhibit which all stock and mutual companies transacting casualty and surety business in that State will be required to furnish as of December 31st, 1923. The second paragraph of this letter reads:

"The analysis of expenses required by this exhibit is more detailed than at present provided for in the Annual Statement blank. Companies that have not already made such detailed analysis will find it advisable to at once review the expenditures of the current year and allocate them to the various divisions of expense and lines of business in accordance with the best data available. A statement of the methods employed in allocating expenses is to be submitted with the return."

Much has been written relative to apportioning expenses as to various items and specific minor subdivisions of a particular line, but the broader question of allocating among the various lines themselves has not been satisfactorily answered and is the one upon which the New York Insurance Department requires detailed information. Mr. Claude E. Scattergood's article on "Cost Accounting in Casualty Insurance" in Vol. II of the Proceedings of this Society relates to the subject, but as Mr. Elston in his paper "Expense Investigations" published in the Transactions of the Actuarial Society of America says,

"Cost accounting need not raise unnecessary barriers. Without 'Cost Accounting' you can have, and companies do have, systems of at least very satisfactorily apportioning their expenses."

Mr. Elston then goes on to state that separate ledgers should be kept for the different classes of business, unless any class is too small to warrant it. His general survey is then so complete,

so important and so much in harmony with the general practice of most companies that a review of the subject would be incomplete were it not reiterated. The following excerpt is therefore taken from his paper:

“Of course, the first principle to be observed is to directly apportion all expense items that can be charged without too great expense. This generally includes medical and inspection fees, most taxes and most of the home office salaries. Some items as commissions, legal expenses and loss expenses should be separated even if the expense of doing so is high, just as premiums and claims should be accurately determined. This is essential because they are the fundamental items in each line of business.

“Resort may be had to various devices to help keep the analysis correct—for instance, different colored salary checks may be used for different departments. Home Office traveling expenses may be apportioned to the same department as the salary of the person traveling. In the case of the higher officials a division of salary is necessary, based best, it would seem to me, on the individual's estimate of the best ratio of division. Rent may be figured very accurately on the basis of actual space occupied and apportionment factors used for a whole year unless unequal growth and rearrangement of departments make a change in the factors advisable.

“The various other expenses except the investment can be apportioned in different ways. Some, like postage, telegraph, telephone and express, it may be possible to charge directly. One troublesome item is furniture and fixtures, because there is likely to be so much transfer between departments. An apportionment of this and items like heat, light and maintenance of offices, etc., may be made according to rent (assuming the latter carefully figured) with more reason than at first appears. Of course, the space in the different departments occupied by clerks' desks and stenographers' typewriters is in general proportion to the rent. But more expensive furniture for an officer as well as special furniture or machines occupy additional space somewhat comparable with their greater value. It should be borne in mind, however, that as such items must be charged off in the annual statement, as expense in the year of purchase, their assignment should be rather according to the rate of expansion, that is proportionate to the increase in rent rather than to rent itself. If there is considerable inequality between departments in the amount of work done on sorting and tabulating machines, they ought to be treated separately.

"Again the main fact to be borne in mind is not to make such a great subdivision of these miscellaneous expenses that the accounting expense itself becomes prohibitive. Of course, the latter may in many cases be materially reduced by making the original entries without apportionment and making the proper division of expense and consequent adjustment entries once for all at the end of each month, applying the factors to the month's appropriate totals.

"Another great saving may be effected by dividing the comparatively small but troublesome residue of expenses not otherwise assigned in the same proportion as the assigned expenses, if no better method suggests itself.

"The most consoling fact to one inclined to be too conscientious is the small comparative error in the total, if the apportionment of small expense items, as for instance advertising, is not on the best basis possible. It is surprising what a small proportionate error in the Life expenses is made, even if a known error in the individual item is used. And, of course, if the work is done as free as possible from bias, there is at least the hope that errors in one direction will be counterbalanced by errors in the opposite direction, particularly where the methods used are the consensus of opinion (probably a compromise) of several individuals."

The company with which I am connected conducts several classes of business, to wit,

Industrial insurance, with premiums payable weekly,
Ordinary insurance in all its various subdivisions,
Group Accident and Health insurance,
Personal Accident and Health insurance.

Included in the Ordinary business are certain assumed companies, such as the Pittsburgh Life, where separate accounts are definitely agreed to, and which are, therefore, in the nature of separate classes. The satisfactory allocation of expenses among these different classes presents the same problems which are presented with different lines of casualty business, and it might be of interest to the Society, and aid in the general discussion of the problems if certain studies recently made were examined.

In order to have the proper background, it must first be understood that for years most careful and minute scrutiny has been given to each and every item of disbursement, in order that it

may be properly charged, either in total to the class of business incurring such expense, or to different classes in proportion to their responsibility for it.

The New York Insurance Department as a result of the examination to ascertain the condition of the company as of December 31, 1915, stated as follows:

"A fair conclusion then, it seems to me, is that the present bases of apportionment are substantially accurate as a means of determining the respective share of each department in the general expenses of the company. Apparently the endeavor on the part of the company is to prevent discrimination between departments and provide for each that it shall bear its proper share of expenses."

It has generally been assumed, as Mr. Elston states, that any errors would be small and in the long run tend to offset one another, but an attempt was made to determine independently certain totals of expense not readily apportionable.

Listing the items of expense, as appearing in the Annual Statement, into those which must be, those which can be, and those which offer difficulty in being charged directly, the following schedule was prepared from the 1922 Annual Statement of the Metropolitan Life Insurance Company.

Items which Must be Charged Directly	Items	Life Statement	Items	Miscellaneous Statement
Commissions.....	20-22	\$45,058,190.03	28	\$ 95,563.09
Legal Expense.....	29	40,309.82		
Health and Welfare.....	39	4,762,970.59	{ 45	2,909.83
			{ 51	6,176.12
Loss Expense.....	16	72,828.08	22	2,819.50
Total.....		\$49,934,298.52		\$107,468.54
Items which Can be Charged Directly				
Medical and Inspection Fees.....	25	\$ 2,371,621.42	31-32	\$ 25,531.80
Taxes, Fees, etc.....	33-38	4,970,147.33	37-43	9,234.74
Specific Investment Expenses charged against Interest.....	31-32	2,838,606.00		
	40	24,546.39		
Legislative Expenses.....	40	13,374.44		
Association Life Ins. Prests.....	40	22,636.31		
Total.....		\$10,240,931.89		\$ 34,766.54

Items Not Readily Chargeable	Items	Life Statement	Items	Miscellaneous Statement
Salaries.....	26	\$ 9,883,549.07	29	\$192,028.93
Rents (less \$1,144,198.07 Dist. Office rents).....	27	1,969,992.47	33	39,991.87
Advertising, printing and Stationery, postage, etc.....	28	1,754,087.72	{44 45}	36,427.27 3,095.07
Furniture, fixtures and safes (less \$74,715.27 for D. O.).....	30	189,068.27	46	5,339.38
Lunches for H. O. employees.....	40-43	559,879.52	51	9,077.45
Conservation and Revival of business Company's publications.....	40-43	124,545.95		
Examinations by Depts. and Public Accts.....	40-43	285,587.74		
Handling and shipping Field supplies	40-43	25,839.75		
Outlay on unlisted assets.....	40-43	137,648.42		
Law Library.....	40-43	19,446.39		
Miscellaneous Office Supplies and furnishings.....	40-43	2,208.00		
Storage House expenses.....	40-43	80,729.19		
Typewriters, Calculating Machines, etc.....	40-43	6,583.97		
Service Medals.....	40-43	231,177.37		
Pictures and frames.....	40-43	22,982.72		
Conventions.....	40-43	4,385.29		
Laundry and Kitchen Improvements, etc.....	40-43	90,160.38		
Home Office Traveling Expenses.....	40-43	302,519.70	29	15,122.13
Books, Magazines, etc.....	40-43	37,669.54	46	1,042.80
Medical Division expense.....	40-43	7,564.36		
Photographic Bureau.....	40-43	13,801.59		
Expense of assumption of business of reinsured companies.....	40-43	38,674.20		
Sundry General Expense.....	40-43	5,175.23	34	10,849.97
		131,670.64		
		\$15,874,947.48		\$312,974.87
Total from Life Statement.....		\$15,874,947.48		
Total from Miscellaneous Statement				312,974.87
Total.....				\$16,187,922.35

Certain changes might at first be considered advantageous in this grouping, as for instance the inclusion of salaries and rents in the group which could be charged directly. This is true to a certain extent, but it is the salary, rents, etc., of the Executives which presents the difficulty. The salary known to be chargeable directly, together with the clerks to whom payable, offered the means of those more or less independent total allocations which are now presented. It so happens that one division, necessary on account of the size of the Company, is the Personnel Division with general supervision of all employees. This Division is

familiar with the clerks in all sections, knows in general the nature of the work and the number and weekly salary of all clerks engaged thereon. In those sections, relatively few in number, where work connected with different classes is performed the Personnel Division is able to divide the clerks proportionately to the work. From this Division it was ascertained that the total average number of clerks in the Company for the year, excluding Executive and Supervisory officials and heads, numbered 6,829, subdivided with their weekly salary, as follows:

	No. of Clerks	Weekly Salary
Industrial.....	3,422	\$77,121
Ordinary.....	2,706	68,780
Pittsburgh L. & T.....	39	909
Group.....	299	7,376
Accident & Health.....	52	1,540
Investment.....	311	8,612
	<u>6,829</u>	<u>\$164,338</u>

With this information was it possible to adopt a simple and practical, yet logical and reasonable formula for making an independent allocation of the \$16,187,922 of miscellaneous expense not readily chargeable, and if so what was it? It is not based on Premiums for the reason given by Mr. Elston. It cannot be Policies, as Industrial policies are handled in groups while in the Group Division one policy will cover anywhere from 50 to 50,000 lives. It cannot be Insurance for the same reasons that apply to Policies. The Group policy that insures 50,000 lives is looked after by six clerks. In like manner the Reinsurance Division secures \$50,000,000 of insurance in one year which is looked after by very few clerks. The Industrial Department with 24,000,000 policies is conducted with about the same number of clerks as the Ordinary with its 3,500,000 policies, and it would seem logical to predicate the expense upon those who cause the expense—namely, the clerks. Each clerk receives a salary; each clerk requires space and equipment such as furniture, stationery, printing, postage, typewriters, calculating machines, service medals, books, magazines, lunches, and in fact all the items given under the schedule of Home Office Expenses. Supervision is incident to clerks. It also seems logical to assume that the expense of supervision should follow the expense of the supervised, that

on the average each clerk would submit a proportionate number of questions for executive decision and that accordingly the salaries, rents, stationery, etc., for the executives would follow those of the clerks. Certain Divisions may need higher priced help than others which can have their work more systematized and therefore handled in a more routine manner; so salary of clerks as well as number should be considered.

We could think of no more simple formula, therefore, than to take the number of clerks of each Division, together with their weekly salaries, and adjust the Home Office expense pro-rata thereon, i. e., total salaries including the Executives' on the basis of the weekly salaries of the clerks and all other expenses on the number of clerks. Accordingly the two items of salary, \$9,833,549.07 appearing on the Life blank, and the \$192,028.93 appearing in the Miscellaneous blank, were combined and the total of \$10,125,578 was distributed on the basis of the \$164,338 of weekly salary, and the balance of the Home Office expenses amounting to \$6,062,344 was distributed on the basis of number of clerks.

In making this distribution the clerks engaged in supervising the investments of the Company, including policy loans, were treated as a class by themselves in order that the unallocated investment expenses might be determined. These investment expenses are deductible from interest, and decrease the amount of interest apportioned to each fund.

TABLE SHOWING DISTRIBUTION OF EXPENSES NOT READILY CHARGEABLE

	Clerks	Salary	Expenses Other than Salary	Salary	Total
Industrial	3,422	\$77,121	\$3,037,829	\$4,751,759	\$7,789,588
Ord. & Int	2,706	68,780	2,402,212	4,237,835	6,640,047
Pittsburgh Life.....	39	909	34,622	56,007	90,629
Group.....	299	7,376	265,433	454,468	719,901
Personal A. & H.....	52	1,540	46,162	94,886	141,048
Investments.....	311	8,612	276,086	530,623	806,709
Total.....	6,829	\$164,338	\$6,062,344	\$10,125,578	\$16,187,922

This distribution compared with the actual distribution as made is as follows:

SCHEDULE SHOWING COMPARISON OF EXPENSES AS DETERMINED ON CLERKS
AND SALARY WITH EXPENSES ACTUALLY CHARGED

	Expenses as per Distribution	Expenses Actually Charged	Percent of Expenses Charged
Industrial.....	\$7,789,588	\$7,655,224	101.76
Ordinary.....	6,640,047	6,803,917	97.59
Pittsburgh Life.....	90,629	91,544	99.00
Group.....	719,901	724,389	99.38
Personal A. & H.....	141,048	167,088	84.42
Investments.....	806,709	745,760	108.17
	\$16,187,922	\$16,187,922	

The first three classifications on this list—Industrial, Ordinary and Pittsburgh Life—are relatively old lines. The Group is relatively new, while the Accident and Health business is just beginning. The figures indicate that where business is established an apportionment similar to the above will produce satisfactory results. Where a line of business is just being started the organization expenses are relatively heavy, although very nominal in amount, and in a well established company it is an important problem just how much additional expense should be charged. To take a concrete example. The company in question had more agents than it had Personal Accident and Health policies at the end of 1922. In organizing this branch it was necessary to supply these agents with manuals, rates and literature entirely out of proportion to their initial production. Also many activities are indulged in which would not be undertaken by a company starting only an Accident and Health business. True, certain advantages accrue to the field force in connection with transacting a new line of business for an old established company, but it is a question worthy of serious consideration whether a new branch should not be treated as an integral part of the company, with its expenses prorated in some such method as outlined. As the business develops the two methods should tend to approach each other until with all departments firmly established they should give almost identical results.