Journal of Accountancy

Volume 17 | Issue 6 Article 2

6-1914

Uniform Systems of Accounts for Public Utilities

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The law of Ohio, creating the public utilities commission, in effect August 9, 1913, empowers the commission to prescribe uniform systems of accounts to be kept by all public utilities or railroads, including municipally owned or operated utilities; to classify said public utilities or railroads, and to establish a system for each class; to prescribe, further, the manner in which these accounts shall be kept. Said accounts, when practicable, shall conform to those required by the tax commission of Ohio, and shall conform, as near as may be, to those prescribed by the interstate commerce commission for utilities coming under the jurisdiction of the federal commission.

The apparent reason for this latter proviso is that, as the interstate commerce commission has jurisdiction over interstate business, and as many corporations do both a local and interstate business, it would cause unnecessary inconvenience to require a corporation to keep its accounts in two ways — one according to the orders of the interstate commerce commission and the other according to the requirements of the public utilities commission.

The power to establish uniform systems naturally includes not merely the enumeration of the titles of the accounts, but also specific provision as to the method of keeping these accounts, the definition of terms used, and a statement of how various items shall be debited and credited.

The law also provides that when the commission has prescribed the form of accounts, records and memoranda, it shall be unlawful to keep any other accounts excepting such as shall be explanatory of, and supplemental to, the accounts so prescribed. The commission has access to all books of account and records, and may designate its officers and employees to inspect and examine any and all accounts.

We expect that the preparation of these uniform systems will take some time, but the importance of establishing systems that

* Address delivered before the Ohio Gas Association, at Columbus, March 25, 1914.

will be elastic, so as to meet all the varying conditions of business, is so apparent that it behooves us to make haste slowly. We wish to take advantage of everything that has been done by other state commissions and by the federal commission, to the end that we may be as consistent as possible, and not deserve the questionable compliment of making burdensome requirements, just because we have the power to do so.

It is, of course, our intention to set up a scheme of accounts for each public utility; each scheme to be sub-divided into classes, so as not to require the small company, with limited means and few employees — each of whom may perform several functions — to keep the same accounts that are required of a big corporation, with large expenses under each heading, and with an organization permitting a minute differentiation of functions.

The corporations, operating each different utility, will be grouped into classes according to the magnitude of their operations. This will establish uniformity and permit trustworthy, comparative statistics to be made, and, at the same time, preserve the flexibility, which is so essential.

The desirability of uniform accounts as a basis for uniform reports has in recent years been recognized by an ever-increasing number of accountants, economists, governmental officials, and the public in general. Past experience demonstrates, however, that if this uniformity is ever to be attained, it must be accompanied by a common language of accounts; by the universal use of common terms with the same significance.

I shall take it for granted that, theoretically at least, we are all in favor of standard and uniform reports from not only all public utilities but from all municipal enterprises, and, in fact, from the municipalities themselves; that we appreciate the necessity for such reports, and that we earnestly desire to see standard schedules authoritatively provided. Accepting this position, we may then address ourselves immediately to the practical difficulties, which this programme involves, and the question arises: "What obstacles must we first overcome before such standards can be provided?"

To answer this question properly involves the statement of the whole scheme of accounting. In the first place, schedules and schemes of uniform accounts should be accompanied by a carefully developed nomenclature, and all the terms employed should be strictly defined.

In applying the science of accounting as an aid to the successful administration of a business or enterprise for gain, two principal classes of accounts are always employed; namely, one group of accounts known as "balance sheet accounts" and another group known as "revenue and expense accounts."

In addition to these two principal classes of accounts, most enterprises, doing any considerable amount of business, keep additional, or supplemental, accounts of a more or less statistical nature, to aid in furnishing the information needed for their systematic and scientific administration.

Balance Sheet Accounts:

The balance sheet accounts are those ledger accounts in which are kept —

(1) A record of the wealth in the possession or control of the company;
(2) The claims of its creditors and trust beneficiaries, and
(3) The equities of its proprietors or owners in the wealth possessed or controlled by the corporation.

They are the accounts which, when properly summed up in a statement called a "balance sheet," will present a correct exhibit of the financial status of the enterprise at a specific time.

These accounts are by some accountants called "indicant accounts."

I shall have something more to say, later on, as to three elements of the balance sheet, namely: assets, liabilities, and proprietorship.

Revenue and Expense Accounts:

These accounts are those ledger accounts in which are recorded the amounts that *accrue* as revenues, and the amounts that are *incurred* as expenses, as a result of the operation of the enterprise. They are the accounts which, when properly summed up in an "income and profit and loss account," disclose the result, or outcome, of the business for a given period of time.

Any system should, therefore, clearly and accurately classify the specific source of all income and logically and consistently classify the specific purpose of all the expenses.

Prerequisites for Successful Systems of Uniform Accounts:

The annual revenues of the different public utility enterprises in this state vary so greatly that logically the number of accounts that shall be required, or that could be used to advantage, must necessarily vary with the volume of business and with the magnitude of the enterprise. Hence, the uniform system of accounts, which the commission has in mind, will be first of an elastic character and adjustable to the requirements of large and small enterprises, and to that end will have the following special characteristics:

(1) The financial data must be so classified, and the accounts so arranged, that they will provide summaries of results or conditions, along the same fixed lines and upon the same bases, so that comparisons can be made between the summaries of different fiscal periods and between those for similar enterprises, whether they be small and comparatively simple or very large and complex.

(2) The accounts must so divide and sub-divide expenses as to disclose the three elements which make up the total cost of service, *viz.:*

- (*a*) The demand cost
- (*b*) The customers' cost
- (*c*) The consumption cost; and, in turn, again separate these costs into those that are "fixed" and those that are "variable," so that from the data it will be possible to determine the equity and wisdom of existing rates for services, and also to make possible a revision of incorrect rates for such services.

(3) The accounts must be so designed and designated as to make the system readily understood, and thus easy of application.

Groups and Orders of Accounts:

To meet the requirements, as stated, the accounts of this uniform system should be arranged in different groups, sub-groups, classes, sub-classes, and minor divisions, and must, therefore, be of several orders — each order and each account bearing a definite relation to all the others.

The uniform system should also be devised in such a way that the number and kind of accounts employed may be adapted to the individual requirements of each enterprise, while at the same time providing accounting data of a uniform and comparable character.

The decimal system of notation for designating the various accounts will probably be used, which used in connection with capital and small letters of the alphabet lends itself to practically unlimited expansion.

Elements of the Balance Sheet:

Referring again to the balance sheet — I think that no one will fail to note the distinction between an asset which you own and a liability which you owe. Now, the excess of what we own over and above what we owe measures the "proprietorship."

In accounting the proprietorship or the proprietary interests are the property rights or equity of the stockholders, owners and others who constitute the proprietors of the business or enterprise, in the assets or wealth belonging to, or employed in or by, the business or enterprise.

In a sole proprietorship this element is usually carried in one account called "net worth"; in a partnership each partner's net worth is set forth in an account bearing his name; but, in a corporation, it is made up of the capital stock, surplus and the various reserves which have been especially ear-marked and set aside out of surplus.

Universally in the past it has been and for the most part it is still the practice of a great majority of accountants to list these proprietorship accounts in the balance sheets and ledgers as liabilities; and many writers on accounting have endeavored to explain how these interests *are* liabilities of the business or corporation, not to outside creditors, but to the owners. But economists have pointed out the great difference between proprietary interests and liabilities, which is really fundamental to a proper statement of the assets and liabilities. This whole matter may be summed up and stated very concisely by saying that proprietary interests are "rights in," while liabilities are "claims upon" the assets of a business or enterprise.

Our best modern authority for this treatment of the balance sheet accounts with credit balances is PROFESSOR CHAS. E. SPRAGUE, who, while a master of arts and a doctor of philosophy, as well as a certified public accountant, was also a very practical business man, and was for many years the president of the Union Dime Savings Bank of New York.

We also hope to set up the accounts covering the much mooted question of depreciation and reserve for depreciation, so that the interests of the enterprise and of the commission, which represents the state of Ohio and its people, may be reconciled.

At present, I desire to enunciate broad principles, rather than to go into the refinement of accounts, which after all is a mere matter of detail and bookkeeping procedures, after we have laid a sound foundation of principles.

Elements of the Income Account:

Referring, now, to the income account — the excess of the total income from all sources over the expenses of all kinds is the net profit for the fiscal period. The only disposition to be made of this is to transfer it to an "undivided profits" account, usually called "surplus"; against which is then charged the disposition of the net income, in the way of dividends paid or transfers to specially ear-marked reserve accounts.

Now, the income is received, first, from operating revenues, against the total of which are set up the operating expenses. It seems to me that the most of our immediate work lies in the proper allocation of the expenses incurred in securing a certain operating income; and here again I wish to suggest some general, broad principles which underlie the operations of any and every public utility.

In point of time, the first step taken by any utility is to spend money for a plant, for land, buildings and equipment, and as soon as these are installed and operations are commenced money must be spent in the maintenance of these buildings and equipment.

The elements of maintenance expense are superintendence, labor, material and other miscellaneous expenses. By means of analysis these charges can be applied directly to any unit or portion of plant, no matter where located.

Of course, building a plant and maintaining it in working order will not produce any revenue. The plant must be operated; so our next great division of expenses is operation; and the elements for this are almost the same as for maintenance, except that the labor and material can be sub-divided into various classes, according to the specific functional character of the expense. Operation can also, by means of analysis, be allocated directly to the plant or unit where the work is performed.

But, even while maintaining an operative plant in good working order, there is constantly something happening to the plant, under our very eyes, and yet its action is so slow that we do not notice it until forced to by the demands for renewals and replacements.

This much discussed, and little understood, action is depreciation, which is caused by, and is composed of, the following three elements:

(A) Wear and tear
(B) Obsolescence and inadequacy
(C) Accidental breakage

and it it is overcome by the following:

(X) Repairs
(Y) Renewals and replacements
(Z) Betterments

If the sum of (X), (Y) and (Z) is more than the sum of (A), (B) and (C), for a fiscal period, then the assets are worth more than at the beginning, and there will be no need of charging anything for depreciation. But, because of the fact that frequently replacements and usually betterments have been charged to an assets account, instead of to an expense account, and no depreciation or inadequate depreciation has been set up, the result has often been payment of dividends out of capital and, eventually, bankruptcy and reorganization.

Whether or not depreciation can be allocated to the various units of investment, and tied into the cost of operation at different points, depends upon the condition of the books of account of each individual enterprise. If the assets of buildings and equipment cannot be analyzed so as to set out the different classes of units, their respective age, original cost, (or reproduction cost with depreciated value to date), realizable junk value, etc., so that some really intelligent percentages can be applied, then the only feasible plan is to use rough estimates for a few years, until the property can be appraised, either privately or by the commission, when a complete scheme of depreciation accounting can be applied.

These three, then, maintenance, operation and depreciation, will ultimately be so analyzed as to allocate each portion of this expense against the unit of production or transmission, as the case may be.

General Expenses and Fixed Charges:

General expense, taxes and interest are in the nature of general overhead, and while they are a direct charge against revenue or income, it is not expected to distribute these directly against the revenue producing factors, unless they cover a variety of plants, such as an electric light and power, railway and gas plant all operated by the same company. In that event, some arbitrary method must be devised, based upon the ratio that the expenses of each plant bear to the company's whole expense, or upon some other basis of allocation, which a study of the problem might show to be an equitable one.

Let it be understood at this point that revenue includes all revenue accrued or earned during the fiscal period, whether the same be collected or not. That is to say: all income earned to the end of the fiscal period must be credited to some revenue account and charged to an account receivable.

Likewise the term expense includes all expenses incurred, whether the same have been paid or not; *i.e.*, everything used in making the income for the period must be charged up as an expense and credited to some liability account, being especially careful to see that anything taken into inventory has been credited to the proper liability account in the books.

Fiscal Dates:

As to fiscal dates, I believe that, with proper attention paid to accruals and prepayments and a workable scheme of perpetual inventory accounts, very close approximations can be made in the monthly reports of the income and expense and of the financial standing, so that any fiscal date chosen can be easily fitted into the corporation's accounting. These monthly reports can be adjusted by an actual physical inventory, semi-annually, say at June 30th and December 31st. I, personally, feel that no concern should allow twelve months to pass before making a "clean up," and then possibly have to wait two or three months more for figures. With modern accounting procedures these results can be very closely approximated monthly and corrected absolutely at the end of each six months period.

The books need not necessarily be closed oftener than once a year.

There are so many different fiscal dates that it is almost presuming too much to expect all the various authorities to agree. An effort will be made, however, to have the tax commission and the public utilities commission agree on fiscal dates and financial statements required to be furnished each of the commissions by all public utilities, so that the adjusting of the books to the statements will be reduced to a minimum.

The records should be designed in accordance with the required statement classifications so that the information may serve its purpose substantially as it is automatically collected upon the books, and thus avoid the unnecessary work of a re-analysis.

Finally, as before stated, for the sake of economy and consistency the commission's requirements as to accounting, reports, etc. will follow in the main the requirements of the federal government for corporations subject to federal regulation by the interstate commerce commission.

Benefits of Uniform Accounting:

The results of the creation of such a system will be beneficial to the public, to the corporation manager, to the prospective investor and to the present holders of stocks and bonds.

There is the consumer, who is anxious to know whether he is being charged more or less than a reasonable price for the service rendered, and whether the charges ought to be decreased or increased, in view of the actual cost of operation and a fair return upon the investment. It may be that he prefers improved service. The facts must be known in order to determine whether it is reasonable for him to demand it at existing rates, or whether an increased charge will be necessary.

The tax payer desires to know whether the corporations are bearing their proper share of the burdens of government and whether the taxes paid may reasonably be increased or decreased.

The prospective investor is interested because he will be able to determine whether he may wisely invest. He is entitled to know the facts; and without a proper system of accounts he can only surmise or guess what the actual situation is. If he does not have the facts, his surmise may or may not prove correct, and the uncertainty thereby introduced not only tends to prevent the genuine investor from putting money into the securities of public service corporations, but makes it difficult for these corporations to secure the funds with which to develop their undertaking.

Further, the efficient and progressive corporation is apt to be classed with the non-efficient and badly managed corporation. The former suffers because of the misdeeds of the latter, and the latter tries to rise upon the record of the former — a condition which is injurious to both the investing and the general public and unjust to all concerned.

It goes without saying that the present bond and stockholders having put their money into the enterprise are entitled to know the results of operation, and the actual status of the company in all details. It is hardly conceivable that any one would dispute this assertion; but it is a fact that not infrequently the holders of securities have been kept in the dark and ignorant of important matters affecting their own company.

If there is mismanagement or improper use of corporate funds, how can stockholders punish the guilty unless they know of it? On the other hand, how can they reward efficient management or distinguish efficiency from inefficiency, unless there are accurate reports revealing facts?

In order to show accurately the actual conditions, so far as they can be presented through the science and art of accountancy, income and expense should be subdivided so as to show each source of revenue and the amounts received from each source, and the purpose of each expenditure and the amount so spent. Of course, this does not mean that a system of accounts should show every voucher that is drawn, but there should be such a classification of vouchers as to separate each expense from others that are not of the same character.

This will be sought in the systems to be adopted, so that it will be possible in the future to analyze expenses and to show the cost of performing each separate and distinct function. It is only through such a system that the operating man himself is able to discern whether there is unnecessary waste or greater economy can be secured by more attention to special features.

Uniform accounting would not reach the desired result if it were not possible to carry comparison beyond the chief items and into an analysis of the details which go to make up the main rubrics.

Under a proper system it will be possible not only to compare the results obtained by the various companies throughout Ohio, but also, perhaps, to compare with other states, thereby stimulating efficient and economical operation.

Another purpose of uniform accounting is to state the fundamental principles according to which accounts should be kept so as to prevent the charging of items to wrong accounts. This problem would be simple if all moneys expended within a fiscal period were for labor or materials which were fully utilized or consumed during that period, and which were not carried over in any degree for use in a following period. But in practically every case there is some plant that lasts more than one year, the cost of which must not be wholly charged against the service rendered in a single year.

From this fact arises the difficult problem of framing a system which shall secure in each year's accounts the inclusion of the proper portion of the fixed capital or fixed assets consumed during that year.

The danger upon the one hand is that a sufficient amount will not be expended or set aside to keep the property of the company up to the proper standard. Sometimes rates are too low, but more often the straining for big dividends leads to the setting up of a large book profit by neglecting repairs, renewals or provisions for depreciation. The virtual effect of such a policy is to hand each stockholder, year by year, a small portion of the plant in the shape of dividends.

Even the common method of including the cost of repairs and upkeep of the productive plant in operating expense for the year in which the money was actually spent is objectionable, for it allows the managers of the enterprise to put either more or less money into maintenance, and thus overstate or understate true costs at will. Even under conscientious management operating costs would vary from year to year according to the amount of reconstruction necessary.

The other danger, of which there has been less experience so far, is that an undue amount will be taken out of earnings and spent upon the plant, usually in the form of additions to plant. In this case, provided capital receives a fair return, it is the user who suffers, for he has been taxed without his leave to provide capital for the undertaking and without receiving in return either stocks or bonds.

To guard against this possible overstatement of the operating costs, it is necessary to provide that extensions and improvements of the plant shall be charged to an asset account and not to an expense account. Unless such additions to the assets are shown in the fixed assets, their value would be carried as a secret reserve until some opportune time for their distribution in the form of stock dividends, or in the form of extra cash dividends, the funds for which have been meanwhile secured from the sale of stocks or bonds to offset the first cost of the additions to plant which were made out of earnings. Even if neither of these methods is allowed the charging of additions to income is improper, because thereby costs are abnormally inflated and the public is led to believe that profits are not sufficient to warrant better service or a reduction in rates.

Furthermore, the existence of this secret reserve is an inducement for the manipulator to come in; it is an attractive prize, if he can only reach it without running foul of the law in so doing.

All of the foregoing is intended to show that the primary purpose of a uniform system of accounts is to ensure the integrity of capital and the correctness of the charges to costs of operations. This term "cost" is used here in a general sense as meaning all costs incurred, whether for maintenance, operation or depreciation.

Depreciation Scheme

Public utilities should be required to ascertain the life or term of service of their fixed assets, and to include in the operating costs of each period a sufficient allowance to cover that part of the life of the productive plant which has expired during the year. The deterioration that has taken place during the year, at times may be no greater than the expenditures for repairs and renewals (and included in the operating expenses), in which event the operating expenses afford a true statement of the real cost of service rendered. But plant and machinery cannot be made to last forever by repairing. Some allowance must be made each year for the expense of eventual replacement.

The consumption of capital invested in a machine that gives ten years' service is just as much a part of the expense of operation as is the cost of materials consumed in a single day, and it would be no worse accounting to reckon profits before charging up materials consumed and labor used than to do so before meeting the cost of expired outlay on machinery and other fixed plant.

In order, then, that capital may not be impaired, a corporation must provide not only for repairs and eventual replacement, but also for depreciation due to obsolescence and inadequacy. New processes are being discovered and new machinery invented. Plants must be placed upon the scrap heap long before they are completely worn out, because they have been superseded by more efficient machinery. Cities are expanding and conditions are changing so that occasionally certain portions of the physical property have to be reconstructed, because the original plans have been outgrown and are thereby rendered useless. Central stations must be removed to new locations because urban growth has made their first location undesirable or uneconomical.

An accounting system should specifically prescribe how these factors shall be treated. In the first place, in connection with all entries in capital accounts there should be sufficient facts to identify every particular item, and the actual money cost should be given.

The next important step to be taken by the corporation (and I would advise every company to set to work on this immediately) is to determine what amount should be set aside month by month to cover wear and tear, obsolescence and inadequacy.

Every corporation ought to be required to file with the commission a copy of the rules according to which this amount is computed, together with a sworn statement of the facts and the expert opinions and estimates upon which such rules are based.

Suspense Accounts for Discounts

The corollary of the principle that asset accounts shall be charged with only actual money cost is that discounts and commissions upon securities, issued in payment of cash or other assets, shall be charged to a suspense account. Any expense in connection therewith should also be charged to this account. At or before the close of each fiscal period thereafter a proportion of such discount and expense, based upon the life of the security, should be credited to this account and charged to an amortization account, which in turn, should be closed out against the current fiscal year's income.

The amounts thus set aside should be sufficient to amortize the discounts, etc., by the time the debt matures.

Capitalization of Franchises

Another important requirement, which carries out the statutory provisions as well, is that the account *Franchises* shall be charged only with the amount actually paid the state or political subdivision thereof in return for the granting of franchise rights and with the legitimate expenses incident to procuring such franchise rights. This should be exclusive of any taxes or other annual charge and these amounts of intangible capital value should likewise be amortized during the life of the grant.

Effect of Requirements:

The effect of these requirements is that every charge to an asset account must represent one hundred cents on the dollar in money actually spent in creating the property of the corporation. When $100.00 of par value of bonds is exchanged for $75.00 of cash, to be spent for fixed plant, there is obviously no propriety in charging the fixed asset account with $100.00 to be carried there permanently.

The far-reaching effect of establishing such broad, fundamental principles can hardly be overestimated. The investor will be given a guarantee that he has never had before, because one of the things which have worried him most has been the fear that the capital of the company would be impaired and his investment be rendered of little value. No system of accounts that can be devised will absolutely prevent impairment, but a well devised system will go a great way in that direction, and it will certainly keep the amount of actual impairment under safe control.

The removal of such risks will not only attract capital but will lead to the obtaining of capital at a lower rate. When an investor himself must provide against depreciation and impairment out of his interest or dividends, he naturally demands a higher rate of return than if he knows of a certainty that the corporation itself has already made ample provision. This inures to the benefit of the public as well.

Treatment of Appreciation

Under correct accounting principles appreciation in the value of property is no off-set to depreciation. The policy adopted by many public service corporations of depending upon the increase in the value of their assets, consequent upon community growth or changes in market values, is not recognized as proper.

Ultimately, of course, the accounts will reflect these facts. The fundamental principle, however, is that any appreciation shall not appear in the accounts until it is an actuality, *viz.*, when the amount of appreciation has been clearly determined. It should then be shown as such and not buried in the making of depreciation charges.

In conclusion I desire to say that it is my hope that the commission, with its uniform accounting systems based upon the best modern practice, will prove to be a real blessing to the utilities themselves, although it may possibly appear to some of them quite the opposite at this time.

It has always seemed to me that the much to be regretted situation in which so-called "big business" and Uncle Sam find themselves today could have been entirely avoided by the adoption of a policy of honest publicity, *i.e.*, by the corporation taking the public into its confidence and dealing fairly with it. Speaking entirely unofficially, I personally feel that the people do not want confiscation; on the contrary all they want is a fair deal — fair to the consumer and fair to the utility. What would be absolute equity can only be approximated more or less closely as the accounting records themselves disclose the truth. I believe that the only way in which the corporate history of any public utility undertaking can be properly recorded, codified, analyzed and summarized is by means of a uniform system of accounting, built on the broad principles the commission has in mind and which briefly, I have attempted to describe.