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ACCOUNTING FOR PENSION-PLAN COSTS ON CORPORATE FINANCIAL STATEMENTS

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INTRODUCTION

In the past two or three years there has been considerable activity on the part of the accounting profession to establish greater uniformity in the charges made on corporate financial statements for the cost of pension plans. Many actuaries, accountants, and others interested in the problem have attempted to develop a procedure that will satisfy all parties concerned. The purpose of this paper is to set forth the nature of this problem, to give a résumé of what is currently being done, and to suggest possible solutions.

One of the principal problems existing in this area is that different technical terms mean different things to different people. Thus it is essential to have a clear definition of the terms as they are used in this paper. These follow:

a) *True cost.*—This is a theoretical figure which is defined as the amount which should be contributed for the plan in a given year on the basis that, if this same cost (expressed in dollars or percentage of payroll) were contributed for every year in perpetuity, all the commitments of the pension plan would be fully met, and at no time in the future would either more or less than this amount ever have to be contributed. Actually, this true cost can never be computed for a plan in effect but can only be estimated.

b) *Past-service cost.*—This is the amount that would have been in the fund as of the effective date of the pension plan for the employees then included if the plan had always been in effect, if the company had always contributed the normal cost for the plan, and if the actuarial assumptions had been exactly realized.

c) *Prior-service cost.*—This is the amount that would have been in the fund as of the date of the valuation of the pension plan for the employees then included if the plan had always been in effect, if the company had always contributed the normal cost for the plan, and if the actuarial assumptions had been exactly realized. This is the net accumulation of the past-service cost and the normal costs less the benefit payments and expenses, if any, since the effective date of the plan.

d) Normal cost.—This is the amount of the contribution to be made to the fund with respect to the service of the employees during the current year on the assumption that the prior-service costs as of the beginning of the year were fully provided for by the assets of the fund.

e) Standard cost.—This is the amount of the normal cost plus an additional level cost to be charged each year until the pension plan becomes fully funded.

f) Fully funded pension plan.—A pension plan will be considered fully funded when the assets in the fund are sufficient to provide for all the benefits credited to the participants at that point of time.

The terms "contributed" or "contribution" as used above are meant to be taken in the broad sense and thus include credits to book reserves as well as contributions to insurance companies or trust funds. Also, "fund" as used in this paper is meant to include book reserves, insurance company reserves, trust funds, and the like.

For convenience, this paper is divided into the following sections: present practices, problems with present practices, accrual accounting, estimating the true cost, determination of the standard cost, practical considerations, disclosure in the annual statement, and conclusion.

PRESENT PRACTICES

The concern over accounting for pension charges centers on the determination of the amount to be charged to operations each year. Also under discussion is the way the amount should be shown on the financial statement of the corporation, where it should be shown, and what supplemental information should also be provided in the annual report.

The present method of accounting for charges to pension plans on corporate financial statements has evolved because it is simple and logical in many respects. This method is to charge whatever is paid out in cash or accrued for the year. Companies which do not have formal pension plans but which discriminately give pensions to former employees charge on the books the amount of these pensions paid. Similarly, the companies which have adopted formal plans but do not choose to fund them also charge on their books the amounts actually paid to the pensioners. Today, most major companies have funded pension plans for which contributions are made in advance of the retirement of the individual employees. The amount of these contributions is charged as an expense as they are paid.[1]

[1] For accrual taxpayers the contributions may be accrued during the taxable year and paid at any time prior to the filing of the tax returns for the tax year for which they are claimed as a deduction.

With the unfunded plan, or pay-as-you-go plan, the amount charged as an expense for the year will be the actual payments to the pensioners and, generally, is not subject to change by the corporation except in unusual circumstances. On the other hand, for plans which are being funded in advance, the corporation is generally allowed considerable latitude in the amount to be contributed during the year. This is particularly true for many large corporations where substantial funds have been built up in the past to meet pension liabilities. The corporation may use prior contributions to cover current costs. In this way, it is possible to eliminate contributions entirely for a year or more. At the other extreme, the Internal Revenue Service allows corporations to contribute on a tax-deductible basis contributions up to the amount of the normal cost plus 10 per cent of the past-service cost in most instances. Thus the level of the contributions in any specific year and the corresponding charge on the company's books are to a considerable extent within the control of the company. In addition, the actuary's choice of the assumptions and methods used to value the plan affect the range of the amount that can be contributed on a tax-deductible basis.

The amount charged to pensions during the year, on a condensed income and outgo statement furnished the stockholders, generally will be included with other payroll items. Thus the amount charged to pension plans is not shown separately on the outgo statement. Many companies, however, do show the amount separately in the footnotes along with any remaining unfunded past-service costs. The term "unfunded past-service cost," when so used, usually means the prior-service cost less the current assets, valued at cost.

The information shown in the footnotes to the annual statement varies substantially. Some companies say nothing, while others go into considerable detail.

Generally speaking, there are no balance-sheet items with respect to pension-plan liabilities. For plans which are qualified with the Internal Revenue Service, contributions are made to an irrevocable fund for the employees and their beneficiaries, and the assets are not assets of the corporation. Similarly, most corporations consider the liability for pension benefits to be contingent on future events and thus not appropriate for entry on the balance-sheet account. Occasionally, if conditions warrant, there may be accrual items with respect to contributions due and unpaid. A few companies have chosen to establish a book reserve on the balance sheet to provide the benefits of the plan. However, this procedure is seldom used today because of the tax advantage of having a qualified pension plan requiring a separate fund.

Usually, whenever there is a change in the benefit provisions of a pension plan, and less frequently when there is a change in the actuarial assumptions or methods, comments will be made in the footnotes to the annual statement reflecting the change in the prior-service costs due to these changes. Information will sometimes be volunteered as to how this increased or decreased prior-service cost will be met in future years. Whether or not the increase or decrease in prior-service cost is reflected in the footnotes depends on the circumstances of the case. Consideration is given to the size of the item, prior commitments made to stockholders regarding future changes in the plan, and the attitude of the corporation, their lawyers, and the auditors regarding the importance of such disclosure. There is no uniformity of practice in this area.

The Securities and Exchange Commission sets forth in its "Regulations" that certain information must be disclosed in the proxy statements. Rule 3-19 of Regulation S-X has the following statement:

(e) Pension and retirement plans—
 (1) A brief description of the essential provisions of any employee pension or retirement plan shall be given.
 (2) The estimated annual cost of the plan shall be stated.
 (3) If a plan has not been funded or otherwise provided for, the estimated amount that would be necessary to fund or otherwise provide for the past-service cost of the plan shall be disclosed.

Since the SEC requires the disclosure of any unfunded prior-service cost in certain situations, the corporations at the request of their auditors often show this same information in the footnotes to the annual statement. However, there is no requirement for such disclosure.

PROBLEMS WITH PRESENT PRACTICES

Whether or not there is a problem with the present practice of accounting for charges made for pension plans depends on one's point of view. Many corporations take the position that the charge for pension expense is a minor item on the income and outgo statement, and thus simplicity should be overriding. Other corporations feel that management should have some flexibility to meet changing conditions by varying contributions—pension-plan charges—from one year to the next. This gives management the opportunity to level out minor fluctuations in earned income. Others, particularly the accountants, feel that present practices distort corporate financial statements in that companies have a choice in the amount to be charged to operations during the year. Thus a company wanting to show increased earnings may be able to do so by eliminating its charge to the pension plan entirely for a given year. Alterna-

tively, the company that has a particularly good year, but wants to carry forward some of its earnings to a later year, can make a high contribution to the pension fund and thereby increase its current charges. This, the accountants feel, distorts the true picture of the corporation's cost of the operation during this year, which should be disclosed to the stockholders and other interested parties.

Disagreement also exists on what should be disclosed in the annual statement and how it should be done. No one denies that pertinent information should be made available, provided further that it is not misleading or likely to be misinterpreted.

ACCRUAL ACCOUNTING

Accrual accounting for the charge to operations for a pension plan means that the estimated true cost for the pension plan is charged to operations during the year regardless of the actual contribution made to the pension fund. The proposition is that the company has this cost during the year and that this cost should be entered on the books. The accounting profession generally takes this position.

The accountants as independent auditors have the responsibility of satisfying themselves that the financial statement of a company is a true reflection of its operations and conditions for the year. As independent auditors, they have responsibility to the stockholders, to management, and to the public in general where stock is offered to the public. Thus, to the best of their ability, they wish to insure that all items in the balance sheet and income and outgo statements reflect the actual status of the company and its operations during the period reviewed.

With respect to the financial statement, most accountants feel that the income and outgo statement and the resulting net earnings for the year are the most important financial figures. Thus particular emphasis is placed on obtaining the proper entries for this statement. Under the present cash system of accounting for pension charges, management has the opportunity of increasing or decreasing earnings by contributing a small or large amount during the year to the pension fund. It may be within the power of management to show a favorable earnings history from one year to the next for several years merely by adjusting the contributions to the pension fund. Also, it may be possible to adjust the results of a poor year by reducing or eliminating the contributions to the pension fund. This was brought to the public's attention not long ago in the case of a large company. In a particular year this corporation substantially reduced its contributions to the pension plan and thereby increased the after-tax earnings by approximately $46.6 million. The

after-tax income reported for the year was $301.6 million. Thus, by reducing pension-plan contributions below the level of previous years, net income was increased about 18 per cent. The auditors in their audit report made particular reference to this procedure, highlighting the fact that contributions to the pension fund were reduced for the year.

Not only does the present practice make it difficult if not impossible for the average person to make a dollar comparison of the earnings of a corporation from one year to the next but it also makes it difficult to compare the earnings of one company with the earnings of another. Only infrequently is enough information given to provide interested parties with any indication that contributions to the pension plan have had an undue influence on the earnings for the year. Occasionally, footnotes to the annual statement reflect changes in the pension charges from one year to the next. The accounting profession firmly believes that material factors should not be relegated to footnotes or that the footnotes be used to correct a wrong contained in the body of the financial report.

The accountant's apparent answer to this problem is to have companies, instead of charging their contributions as a cost of operation during the year, charge the estimated true cost[2] of the plan for the year. The true cost of the plan, in theory at least, would remain stable from one year to the next unless conditions affecting the plan changed, such as an amendment providing different benefits to employees in the future. The difference in cost from one corporation to another would reflect differences in the actual or expected conditions at the two corporations. For example, it would reflect the fact that one corporation provides higher benefits than another, or it might reflect the fact that one corporation experiences heavier turnover than another. Thus uniformity and consistency would be accomplished by requiring each corporation to charge its accounts each year with the estimated true cost of the plan.

A strong argument in favor of continuing to use the present practice of accounting for pension costs is the practical problems of the alternatives. Also, as indicated earlier, management generally favors the flexibility that is available under the present system.

Justification for charging the actual contributions to the plan is found in the provisions of the plan itself in most instances. Most pension plans contain a provision which states that the liability of the company in event of termination of the plan is limited to the assets in the fund at the time of termination. Thus at no specific point of time is there a liability of the corporation beyond that of the fund which has already

[2] See definition above, p. 318.

been built up. Conversely, when a contribution is made to a pension fund, that contribution is irrevocably made and thus is an actual cost to operations. To accrue a charge on the books of the company in excess of the contribution to the trust fund would imply that there is a liability by the company for pensions in excess of the amount in the trust fund. This is clearly not the case under the provisions of the plan. Conversely, to accrue a charge less than contributed to the trust fund is not sufficient, since the entire trust fund would be paid out to the employees if the plan were terminated at that point of time. Therefore, comparing the liability of the company at the beginning of the year with the liability at the end of the year, it appears that the increase in liability for the company is the contribution actually made to the fund during the year. Since this is the entire increase in the obligation of the company during the year, it may be argued that this is the amount which should be charged to operations for the year.

Many in the accounting profession do not agree with this position, stating that a plan cannot be looked upon as an agreement that will likely be terminated at any point of time. They take the position that the more probable course is that the plan will be continued indefinitely in the future. Since it is more likely that the plan will be continued, the argument runs, proper accounting requires that the charge to operations be on a more realistic long-range basis.

How pension contributions are to be charged on the books of a corporation is a matter not for the actuaries but for the accountants and their clients to decide. They have the responsibility for the accuracy of the financial statement. Although many interested parties have opinions on this subject, it is not the purpose of this paper to review these. The purpose of this paper is to set forth the problems and to suggest some practical and useful solutions. One compromise has been put forward. This includes continuing the present system so far as the financial statement is concerned but using the footnotes to show the estimated true cost for the year and the amount of the difference between this estimated true cost and the amount actually contributed and claimed as an expense for the year. Thus those interested could adjust the net earnings for the year to reflect the cost of the pension plan.

ESTIMATING THE TRUE COST

The independent public accountant is responsible for his opinion on the financial statements which he audits, taken as a whole. He thus has, in effect, a responsibility for all the figures in the statements, including the amount recorded for the cost of a pension plan. However, owing to

the special training required of the actuary, who is a specialist in this field, it will probably fall upon the actuary to advise the accountant and make the necessary computations in the determination of this cost. At the start of this paper, the true cost was defined as "the amount which should be contributed for the plan in a given year on the basis that, if this same cost (expressed in dollars or percentage of payroll) were contributed for every year in perpetuity, all the commitments of the pension plan would be fully met, and at no time in the future would either more or less than this amount ever have to be contributed." From a practical point of view, the actuary probably will determine an estimated true cost on the basis of methods and assumptions agreed to between the employer and himself. To determine the estimated true cost of the plan, the actuary is going to be required to use his skills in a different way and perhaps with more care than may have been required in the past, since the estimated true cost should be neither high nor low. Under present conditions the actuary generally makes a conservative estimate of the cost of the pension plan. Thus his recommendation in regard to contributions is probably on the high side. He recognizes that any excess contributions will be available to meet future costs through termination credits, dividends, excess interest earnings, etc. The cost required for accounting purposes should not contain such conservative elements. A conservative cost estimate would mean charging present operations with too much and future operations too little. Thus the estimated true cost of the plan should be developed on the most probable basis. Each factor going into the actuary's calculations should be given special scrutiny with this objective in mind.

The selection of the actuarial assumptions will require greater precision than in the past in order to arrive at the most probable true cost. There are more than the usual arguments for the use of select withdrawal rates, for example, and, also, for the use of a progressive mortality table instead of a static mortality table. However, it is likely that the most troublesome item will be valuation of the securities held in a trust fund.

The valuation of securities will require a different approach than has been used in the past for most trust funds. For bonds not in default it would seem that the amortized value would be the proper value to use on the theory that the bonds probably will be held to maturity. Using amortized value will stabilize the rate of return on bonds which is important in determining the portfolio yield. It would appear that for common stocks some value should be used which gives some long-range recognition to the appreciation which is expected to occur in the common

stocks. Several methods for recognizing unrealized appreciation have been reviewed in various writings.[3] Thus the actuary will have to be familiar with the various possibilities and select the method which appears appropriate for the case.

Perhaps the actuary will have to use more care in selecting the group of employees to be included in the calculations. Even though there may be an eligibility requirement of five years and age thirty under a pension plan, it might be more appropriate for estimating the true cost to include all employees in the calculations. Similarly, under a plan providing for benefits based on earnings in excess of the earnings subject to Social Security tax, consideration should be given to including in the cost all employees who probably will receive benefits even though they have not yet reached the earnings eligibility level. The actuary may also decide to assume that Social Security benefits or the tax base may change in the future.

In the selection of all the assumptions which affect the estimate of true cost, the actuary must keep the objective clearly in mind—that is, this is a level long-range cost he is seeking. The level will be expressed as a percentage of *total* payroll for most corporations.

There are several actuarial methods which can be used to estimate the true cost of a pension plan. Most of these methods will produce a past-service cost and a normal cost as defined above. If the past-service cost is fully funded or otherwise provided for as set forth later, it would seem that the entry-age-level cost method will produce a normal cost which would be used for the estimated true cost of the plan. Similarly, the aggregate cost method would produce a proper normal cost for accrual purposes. The unit cost or single-premium cost method might also produce a proper normal cost if the company is a mature organization where the average attained age is stable. Thus the actuarial method should not produce a problem to the actuary.

Some actuarial methods might not be appropriate. For example, the attained-age-level method for a new plan with past-service benefits probably would be inappropriate, since this would normally produce high costs in the early years. A similar comment would apply if the aggregate method of funding were used with no initial liability.

The handling of any unfunded prior-service cost produces special problems which have been discussed at length by the accountants as

[3] John K. Dyer, Jr., "Valuation of Equity Investments for the Pension Fund Purpose," *Proceedings of the Conference of Actuaries in Public Practice, 1962–1963*, XII, 142–55; Robert A. Wishart, "Common Stock Appreciation—Methods of Utilizing Unrealized Gains" (New York University Pension Trust Conference, October, 1961).

well as others interested in accounting for pension costs on financial statements. The accounting profession has generally agreed that past-service costs should not be a charge to surplus but should be a charge to the future earnings of the corporation. They argue that there is no value of a pension plan prior to its adoption. A charge to earned surplus would mean that a charge should have been made in prior years which was not actually made. The accountant's position is that, when a plan is adopted, it is expected to be to the benefit of the corporation in the future, and, thus, all parts of the cost are properly charged to the future. Some accountants will modify this in certain circumstances where it is recognized that part of the prior-service cost should have been charged in prior years. Thus for the most part, accountants recommend that the past-service cost be charged to the future earnings of the corporation. Their position is the same regarding increases in prior-service costs as a result of plan amendments.

It was pointed out above that the principal argument supporting the present cash method of accounting for pension costs is that the actual contributions are the limit of the company's liability, in most cases, in the event the plan is terminated. Accrual accounting proponents claim that it is unrealistic to assume the plan will terminate and that the more realistic assumption is that the plan will continue indefinitely in the future. If it is assumed that the plan will never terminate, then it is unnecessary in most cases ever to contribute the unfunded prior-service cost. It would appear that the proper cost with respect to the unfunded prior-service amount would be interest at the assumed rate[4] on such amount. The normal cost plus interest on the unfunded prior-service cost would then be the estimated true cost of the plan. If the actuarial assumptions are exactly fulfilled, the normal cost plus interest on the unfunded prior-service cost will meet plan commitments indefinitely into the future, so that no future management will be credited or debited with any prior cost.[5]

DETERMINATION OF THE STANDARD COST

The normal cost plus interest on the unfunded prior-service cost gives the estimated true cost for an organization continuing forever. Many will object to limiting the contributions to this amount, since the assumption that a plan will continue indefinitely in the future does not necessarily

[4] The assumed interest rate is the assumed rate of growth of the fund from all sources: interest and dividends and profits or losses on sales of securities.

[5] In unusual circumstances involving a large proportion of retired employees this may be insufficient to meet pension payments.

mean that it will not be terminated some day. Most corporations, their actuaries and auditors, will recommend making some contributions toward the funding of any unfunded prior-service costs of the plan. To do otherwise would mean that, if the plan ever did terminate, some of the benefits credited to the employees could be lost.

To meet the objectives of the auditors in regard to stabilizing the charge to operations, the plan should be funded[6] by level annual amounts over an extended period of years. Actuaries and accountants have suggested funding it over the remaining average lifetime of the current active employees. Other periods of years might be equally or more appropriate in specific cases. However, once the period of years over which the plan is to be funded is selected, it should remain fixed.

The "standard cost" for accrual purposes is the estimated true cost of the plan, normal cost plus interest on the unfunded prior-service cost, plus an annual contribution to fund the plan over n years from the effective date. Since the interest on the unfunded prior-service cost reduces over the n years, the above "standard cost" can more conveniently be expressed as the normal cost plus an additional level cost each year until the plan becomes fully funded.[6]

Any increase in past-service cost due to subsequent amendments to the plan can be handled similarly to the funding of any original plan costs as discussed above.

An additional item that has come up for discussion is the handling of gains and losses in the operation of the plan and changes in the normal cost and prior-service cost due to changes in the assumptions used in the calculations.

Since the actuarial assumptions are established on a most probable long-range basis, it would seem that year-to-year gains or losses due to experience differing from the assumptions should be ignored in the standard cost. Thus, based on the actuarial assumptions and methods chosen by the actuary, the standard cost would be recomputed periodically (not necessarily each year), and the result compared with the standard cost in effect. If the difference is minor, probably no change would be made. If a new standard cost is adopted and there is a substantial change, the corporation or its auditor would probably ask the actuary for his comments which could be included in a footnote to the annual statement. This footnote would show the old and new standard cost and perhaps a brief statement on the cause of the change.

The standard cost is not unique. It is proposed that the actuary develop

[6] See definition for "fully funded" above, p. 319.

a standard cost to be used in the place of the theoretical true cost which cannot be determined. While there is only one true cost, there are many standard costs, since the standard cost is dependent on the choice of actuarial assumptions and methods and the period for funding any unfunded prior-service cost. There can and will be honest differences of opinion among actuaries as to the most probable actuarial factors to be used on any one case, and therefore it follows that different actuaries would develop different standard costs for the same corporation.

PRACTICAL CONSIDERATIONS

It might be helpful to have some general guidelines for determining the standard cost of pension plans for accounting purposes. These might be as follows, for different groups or categories of situations:

Group 1.—This group includes union-negotiated plans where the employer is obligated to contribute a certain number of cents per hour or some other fixed amount (which might be based upon goods produced —such as in the coal industry, for example). This amount would be the charge to operations, since this is the complete liability of the company to meet its obligations as set forth in its agreement with the union or other documents.

Group 2.—This group comprises the type of pension plan which is termed "money purchase." Under this type the employer undertakes to contribute a fixed amount each year, generally related to an amount contributed by the employees. Here the company's obligation is only the amount of contributions it makes to the plan, as determined by the provisions of the plan. This amount would be the charge to operations. The cost of individual past-service benefits, if any, would be handled as in Group 4 below.

Group 3.—This group includes the various types of insured plans where the insurance company determines the premium to be paid during the year. This would include individual retirement annuity plans, pension trusts involving individual policies, and group annuity contracts where there are no stated unfunded past-service costs or unallocated funds. Under these the insurance company determines the gross cost of providing the benefits according to its premium rates and deducts dividends, rate credits, and termination credits, if any. The premium charge after deducting credits and any employee contributions would be the charge to operations. (This appears to be the only practical way of handling the multitude of small insured plans in effect throughout the country, most of which are characterized by stipulated premium costs.)

Group 4.—This group comprises the traditional group annuity con-

tracts with individual past-service benefits to be funded in future years. The cost of current benefits would be handled the same as in Group 3 above. The cost of providing the past-service benefits would be handled by having the company adopt, with the actuary's advice, and stated in the footnotes to the annual statement, a period of years over which the past-service cost would be charged to operations. Once this period is selected, the amount necessary to amortize the past-service cost over such a period would be an additional charge to operations each year until the entire past-service cost had been charged off. (This procedure would be similar to selecting a depreciation schedule for a fixed asset under the present accounting procedures.) If, for example, it were agreed to amortize the past-service cost over twenty years, then the annual amount required to accomplish this would be added to the current cost provided by the insurance company to give the total amount to be charged to operations in that year. Any change in the period over which the past-service cost is to be amortized for such accrual purposes should be explained in the footnotes to the company's annual statement, explaining why the change was made, the new period of years for funding the past-service cost, and the effect of the change on the charge to operations.

Group 5.—This group comprises those plans where there is an unallocated fund or reserve prior to retirement. This includes deposit administration funding with insurance companies, trusteed funding, book reserves, etc. For these plans an analogy may be drawn to the company which has an asset, calls in an appraiser to determine its value, and then adopts a depreciation schedule to amortize the value over the asset's future lifetime. In the case of a pension plan, the company calls in an actuary to determine the value of a developing liability. The actuary determines a normal cost and may or may not also determine a past-service or supplementary cost. If there is a past-service or supplementary cost, it would be handled as in Group 4 above. Thus the actuary determines the charge to operations on the basis of a selected actuarial method —a set of actuarial assumptions and a program for making contributions to fully fund the plan over a period of years.

Once selected, none of these factors is expected to be changed until experience or conditions indicate a change should be made. In this way, the charge to operations, which may be expressed as a percentage of payroll or as a dollar amount, will be consistent from year to year for any company. The factors used and the charge to operations may or may not correspond to either the actual contributions or the claim filed with the Internal Revenue Service for tax purposes. A change in any one of

the cost factors (or in the benefit structure of the plan itself) would result in a change in the amount charged which would be explained in the footnotes to the annual statement.

The accountant would turn to the actuary for the determination of this standard cost, just as he would turn to experts in other fields to determine the value of certain assets set forth in the financial statement of the corporation. The actuary should furnish the employer (and his accountant if so instructed) with a certification setting forth all pertinent information, such as the actuarial method, actuarial assumptions, the program for funding the plan, and the resulting standard cost. This certification should be signed by a qualified actuary responsible for the valuation and should be accepted as a competent determination of the standard cost. It is suggested that the accountants accept, but not necessarily be limited to, certifications from the Fellows of the Society of Actuaries, Members of the Conference of Actuaries in Public Practice, Fellows of the Casualty Actuarial Society, and from Active Members of the Fraternal Actuarial Association. The codes of ethics of the above bodies prohibit the signing of certifications by other than qualified actuaries within their organizations.

Group 6.—This group comprises plans for which there is no funding prior to the retirement of the employees—for example, plans with terminal funding—or disbursements of pensions as they fall due. If there is to be a standard cost other than the cash disbursements for pensions during the year, the actuary should determine the amount according to the procedure described for Group 5 above.

The certification, referred to under Group 5 above, which should be provided the employer and probably his accountant, might take the following form:

I certify that I have made an actuarial valuation of the Pension Plan of the XYZ Corporation. On the basis of such valuation, I find that the long-range cost of the plan is approximately 8.6 per cent of the payroll of employees potentially eligible for benefits under the Plan. This cost was based upon data furnished by the Corporation as of December 31, 1963, and was determined using the following actuarial methods and assumptions:

Actuarial Method: Entry Age Level Cost
Actuarial Assumptions:

(*a*) Investment Income: 4 per cent per year compounded annually.
(*b*) Mortality: Group Annuity 1951 Mortality Table with Projection C.
(*c*) Withdrawal Rates: Rates based on prior experience which are illustrated below:

YEARS OF SERVICE

Entry Age	0–1	1–2	2–3	3–4	4–5	Ultimate	Attained Age
20......	.180	.119	.079	.054	.054	.050	25
25......	.173	.116	.077	.053	.052	.038	30
30......	.159	.112	.073	.050	.049	.025	35
35......	.138	.105	.067	.046	.040	.013	40
40......	.115	.093	.060	.041	.024	.006	45
45......	.088	.075	.051	.035	.012	.004	50
50......	.057	.049	.035	.024	.010	.003	55

(*d*) Salary Scale: 3 per cent per year.

(*e*) Retirement Age: 65.

Asset Valuation: Bonds are valued at amortized value; common stocks are valued at cost plus 3 per cent a year so long as the aggregate valuation of common stocks is less than 90 per cent of current market value.

The unfunded prior service cost is being amortized over thirty years from January 1, 1957.

It should be noted particularly that the standard cost need not necessarily contemplate amortizing the entire unfunded prior-service cost. A fully funded condition, as defined in this paper, may be attained when the assets are either more or less than the prior-service cost determined by appropriate actuarial assumptions and methods. For example, the entry-age-level method of funding may produce a prior-service cost greater than the fully funded cost, which would generally be determined by the unit cost method. In such a situation there would remain an unfunded prior-service cost after the plan became fully funded. Further contributions toward funding the unfunded prior-service cost would hardly seem necessary. This standard cost contemplates cost for funding unfunded costs only until the plan becomes fully funded. However, as a practical matter until the plan approaches a fully funded status, the standard cost can be conveniently expressed as the normal cost plus the additional amount necessary to fund the unfunded prior-service costs over n years from the effective date. This standard cost could continue at this level for a number of years but quite likely would be changed when the plan reached a fully funded status.

Where the standard cost charged to operations differs from the actual contribution during the year, it will be necessary to include additional items in the financial statement. For example, if the contribution exceeds the standard cost, there will appear on the balance sheet an item in the amount of the excess which will be labeled "Contributions Paid in Advance." This will be an asset available to meet future standard costs. Conversely, if the contribution is less than the standard cost, there will

appear on the balance sheet a liability item "Pension Costs Due and Unpaid."

Since tax deductions will be claimed for the actual contributions made to the fund rather than for the standard cost, there will be adjusting entries on the financial statement to reflect certain tax deduction items.

It is recognized by the accountants that the above adjustments to the balance sheet will mean that the financial statement of the corporation will contain some peculiar items. For example, an asset labeled "Contributions Paid in Advance" is not truly an asset of the corporation, since the amount is not available to meet any of the company's current liabilities. It is the accountant's position that it is most important to have the income and outgo properly set forth. The balance sheet is of secondary importance.

The decision as to when actuarial valuations to determine the standard cost should be performed would, necessarily, be up to the accountant in the final analysis but certainly should be based upon the recommendation of the actuary. The actuary would make his recommendation considering all pertinent factors which might influence the continued appropriateness of the standard cost. The following probably would necessitate a revaluation of the standard cost: a change in the benefit formula; a large-scale cutback in employment; the purchase or sale of a division of the company; a change in the Social Security Act; etc.

At the time of each revaluation of the standard cost all the actuarial assumptions should be reviewed to determine whether or not they continue to be appropriate for current and future conditions.

DISCLOSURE IN THE ANNUAL STATEMENT

A related topic, which has been under discussion by the accountants, is the information to be disclosed in the annual statements of corporations.

It would appear axiomatic that any material information should be disclosed, but any information which would be of limited value or would be misleading should not be set forth in the annual statement.

The information which should be disclosed would be the amount of the standard cost and the actual amount contributed if it is different. The footnotes to the annual statement would only be used when there is a change in the standard cost. That is, when there has been a new valuation and a new standard cost developed. The footnotes should then indicate the change in the standard cost and the reasons therefore. In addition, either the period of years over which the unfunded prior service cost is being funded or the amount included as a past-service charge should be set forth.

It seems unnecessary to include a summary of the plan provisions in the financial statement. Other employee benefit plans, deferred compensation contracts, etc., are not summarized. This mass of additional material hardly seems worth the space it would occupy. For most readers it would have little or no meaning, and for those readers who are interested this information is available elsewhere.

Since the unfunded prior-service cost is not a liability of the corporation and is a charge to future operations, it seems entirely unnecessary that it be disclosed in the financial report. However, many accountants require its disclosure. The basis for this requirement is that it is currently required by the SEC for certain purposes. These amounts have little meaning, since they can vary all the way from nothing to a substantial figure, depending on the choice of funding method adopted by the actuary. Because of the SEC requirement, much more importance has been placed upon unfunded prior-service cost than it warrants. Under most of the present methods of determining such a figure, it has no significance.

The amount of the fund is also of no significance to the financial statement. The assets held for a qualified pension plan are not assets of the corporation.

A summary of the actuarial assumptions and methods is too technical a topic for inclusion in the company's annual report.

A summary of the plan provisions, the amount of the unfunded prior-service cost, the amount of the fund, and a summary of the actuarial assumptions and methods are all available to interested parties from the filings under the Federal Welfare and Pension Plans Disclosure Act.

CONCLUSION

In summary, it is my opinion that whether or not accrual accounting is to be used in a financial statement is a question to be answered by the corporation and its accountant. If the decision is to use accrual accounting, then the charge to operations should be determined as set forth above for Groups 1 through 6, and, where necessary, the actuary will determine a standard cost as outlined in this paper. In determining the standard cost, the actuary should review with the corporation and the auditor the actuarial assumptions and methods he recommends and the reasons therefor. He should also give his comments regarding the period of years over which any unfunded prior-service costs should be funded.

The corporation and the auditor should accept a certification in the form outlined above, from a qualified actuary, as evidence of the proper determination of the amount of the charge to operations.

DISCUSSION OF PRECEDING PAPER

B. RUSSELL THOMAS:

Mr. Bassett has done an excellent job of setting forth the nature of the problem of accounting for the costs of pension plans and outlining possible solutions to the problem. As he has indicated, accountants are primarily concerned with continuity of pension cost accruals. Therefore, the employer's right under generally accepted actuarial cost methods and under Internal Revenue Regulations to vary contributions to the pension fund from year to year, which constitute the accounting charge under present practices, is not acceptable to accountants. Accountants properly object to the employer being able to reduce or to increase earnings by deciding to increase or decrease the contribution to the pension fund.

Accountants have also suggested that all experience gains and losses be handled on a spread basis in order to assure greater continuity of pension cost accruals from year to year. Under some of the actuarial cost methods in use today, experience gains are offset against the subsequent year's required contributions, with the result that contributions to the fund and the accounting charge for pensions fluctuate considerably if there are substantial experience gains in some years but not in others. It has also been suggested that the market value of common stocks be used in all pension plan valuations and that the effect of gains and losses from changes in market value be handled on a spread basis. This change from the present practice of using assets of the pension fund at cost would reduce the employer's control over the amount of pension cost. Under present practices, the employer, whose pension costs are based on pension fund assets valued at cost, may instruct the trustee to sell assets in order to realize substantial capital gains. Such gains may equal or exceed the contributions otherwise required during the year, so that no contribution is made unless gains are handled on a spread basis. The use of market value and a spread basis of gains would virtually eliminate the employer's control over required contributions, but contributions might be subject to substantial fluctuations as a result of changes in the market value of stocks.

The author's proposed treatment of Group 1 cases—union-negotiated plans where the employer is obligated to contribute a certain number of cents per hour or some other fixed amount—may result in the employer's complying with his commitment under the plan while the plan is actuarially unsound. In cent-per-hour cases the actuary must not only adopt

appropriate assumptions as to the mortality, turnover, interest, and disability rates but must also adopt assumptions as to (*a*) the average number of hours worked per year by the covered employees and (*b*) the expected number of employees to be covered by the plan in the future. These two additional assumptions, which may not be realized because of changing economic conditions, together with the fact that in many cases the contribution basis or benefit level may be changed only after three, four, or five years of operation of a plan, frequently result in plans becoming actuarially unsound. The proposed accounting treatment of such plans—acceptance of the agreed-upon contribution as the accounting charge, whether or not the plan is actuarially sound—may tend to encourage the adoption of cents-per-hour plans, which have a greater tendency toward unsoundness than conventional pension plans.

Mr. Bassett has properly stated that a pension plan will be considered fully funded when the assets in the fund are sufficient to provide for all the benefits credited to the participants at that point of time. He also points out that the standard cost need not contemplate amortizing the entire prior-service cost, since a fully funded condition may be obtained when the assets are less than the prior-service cost determined by appropriate actuarial assumptions and methods. This point should be emphasized and should be explained again and again to accountants, government officials, and other proponents of federal legislation who would require the full funding of prior-service costs regardless of the cost method used in its computation.

If one agrees with the accountants' position that pension costs should be determined on a going-concern basis, the entry-age-normal cost method, with experience gains and losses handled on a spread basis and thirty- or forty-year amortization of the initial unfunded past-service liability, may afford the best basis for accrual of costs in the early years of operation of a pension plan. In keeping with the desire for a reasonable degree of uniformity of costs from year to year, we might well prescribe normal cost plus interest on the unfunded prior-service cost as the ultimate level of costs of the plan. In view of the fact that no skipping of contributions is contemplated in order to satisfy the accountants' requirements, we recommend that no further payments toward the principal amount of the prior-service cost be made when the assets of the pension fund valued at market are sufficient to cover the value of the accrued benefits determined by the use of realistic actuarial assumptions. This will mean that payments toward the principal amount of the prior-service cost will be discontinued when the assets of the pension fund valued at market are sufficient to purchase all accrued benefits from an insurance company.

Thereafter, contributions equal to the normal cost plus interest on the unfunded prior-service cost would be made, even though such contributions may be more than sufficient to maintain the fully funded status of the plan. At this point, it would be appropriate to review all the actuarial assumptions to eliminate any unnecessary margins for conservatism. With a fully funded plan, it should be appropriate to make subsequent contributions to the fund on a minimum basis.

Some of the accountants who have been involved in the pension accounting project of the American Institute of C.P.A.'s recognize that prior-service cost of a pension plan represents only one step in the actuary's determination of the required annual contributions. Neither these accountants nor the actuaries who are engaged in pension consulting work have succeeded in convincing the SEC or most businessmen that unfunded prior-service cost is not a meaningful figure. Under the tentative recommendations in the 1964 draft of "Accounting for the Cost of Pension Plans," a research study of the American Institute of Certified Public Accountants, disclosure of the unfunded prior-service liability would no longer be required. The SEC has not yet agreed to this recommendation and does not plan to change its requirement that this item be disclosed. It is hoped that in cases where the pension fund valued at market is sufficient to cover the value of accrued benefits, even though the entry-age-normal cost method shows a substantial unfunded liability, the actuaries and accountants will insist on using a footnote to the financial statements which will indicate that the pension plan is fully funded, even though the entry-age-normal method shows a substantial unfunded liability. The use of such notes should tend to clear up the misunderstanding on the part of businessmen and the SEC concerning the unfunded liability as computed by the entry-age-normal method.

DORRANCE C. BRONSON:[1]

With apologies to Mr. Bassett, I will use his paper as a lever to hoist into view a question for actuaries communicating on pension-funding matters to consider. This question is "terminology": ". . . called Babel; because the Lord did there confound the language . . ." (Gen. 11:9).

The writers of actuarial pension papers must be the despair of those who undertook to put order into the pension terms as they were being used some years back; since then, the laborers in that vineyard must feel buffeted by whirlwinds, with semantical confusion thrice confounded.

Now, authors on pension funding do not intend to confuse but rather to clarify, to explain their funding concept for their confreres and, often-

[1] Giving his own views, which are not necessarily those of his firm.

times, for employers, unions, lawyers, accountants, government reviewers, and laymen in general. Perhaps, in some ways, they are rather like professors of the same subject, each of whom writes the "best textbook." Actuaries are used to definitions using symbols. It is common practice for one to say "Let A equal *this*, and let B equal *that*," while the next one will start *his*, on the same subject, saying "Let A equal *this plus that*, and let B equal the greater of *this* and *that*." Note each uses an A and a B, but this is the extent of the conformance. Let me cite a few concrete examples of terminology from authors of four recent papers on pension funding, including Mr. Bassett's.

In his 1963 paper Mr. Charles Trowbridge wisely adheres, mostly, to the terms used in his 1952 paper, but he then goes to his own mint to coin a few special issues, such as "benefit ratio" and "fund ratio," admitting, by footnote, that the latter does not mean what certain earlier writers had assigned to it. Mr. Frank Griffin, in his panel statement at last month's Conference of Actuaries meeting uses the term "funded ratio" in the sense discarded by Trowbridge and a term—similar to Trowbridge but quite different in meaning—called "benefit security ratio."

A paper for the same meeting by Mr. John Hanson goes forward with terms he credits to the 1952 Trowbridge paper but not too far forward before presenting some Hansonian coinage (e.g., the terms "annual cost provision" and "total cost provision" are assigned specific meanings). Then shortly we find—remembering the above terms—two superterms in the sentence, "The terms 'cost provision' and 'provision for the cost' refer to both the ***annual cost provision*** and to the *total cost provision*" (my italics). Will it not prove hard going for the rest of the paper to remember these distinct indistinctions (or vice versa)? And yet, to the writer himself—as I know from experience—it is "easy as pie."

As the last of my examples, I advert to the paper at hand. At the start, Mr. Bassett defines six terms, two of which—"true cost" and "standard cost"—are, in spite of the appeal of their adjectives, new to me;[2] the other four use more familiar words but are defined more or less differently from some I have seen before or from those of my own choice (e.g., is his "past-service cost" really always to be the same amount that it was n or $2n$ years ago when the plan became effective?). But to conclude the examples, we writers, in our aim of clarifying pension funding methods, can become so "clarified" ourselves that the following, for instance, no doubt states the obvious in Mr. Bassett's view:

> . . . the entry-age-level method of funding may produce a prior-service cost greater than the fully funded cost, which would generally be determined by

[2] But Hanson to a local C.P.A. group used "true cost," but not like Bassett.

the unit cost method. In such a situation there would remain an unfunded prior-service cost after the plan became fully funded.

My comments and examples above are not in criticism of the aim and substance of the papers cited but are observations on the proliferation of semantical confusion. Each of the four thought-provoking papers by the authors above was focused on some facet of pension funding, intending to "get it across" to the interested outsider as well as to his actuarial confreres. Trowbridge focused on a generalized funding structure, for employer and IRS consumption via their respective experts; Griffin revealed, for almost the first time, statistics which indicate the splendid accomplishments to date in the funding of private pension plans; Hanson—primarily for actuaries and accountants but having implications for all others interested in the country's savings media—advances a case for the suitability of lower funding levels than those needed (and much in use) to attain the "full reserve" concept of actuarial soundness. By extension, at least, his paper impinges on the question of whether funding methods, by and large, are structured to generate fund assets which are, or will be, dangerously too high as the "pension" component in the institutional savings area within the general milieu of our economy; and, now, Mr. Bassett's paper has the purpose of helping to solve the accountant's problems under pension costs and thus parallels, in part, one of Hanson's objectives. Mr. Bassett, from committee work in this field, is well qualified to make proposals to this end.

We thus find that each of these papers has an important objective, all of them of interest to actuaries, and also aimed, more or less, beyond the actuarial audience. These objectives are all commendable, but are they impeded by terms, their definitions and phraseology?[3] The close actuarial reader can no doubt succeed in getting the message, but how about (i) the other actuaries and (ii) the intended outside reading audience? Would most of these two groups give up at the terminology hurdles early in the Hanson and Bassett papers? Or, surmounting that, run into thickets in later usage of the terms? Let me give one illustration that Mr. Bassett "stopped" me with. In one place he tells us that his defined "true cost" is a function of the actuarial method, ". . . the entry-age-level cost method will produce a normal cost which would be used for the estimated true cost of the plan. Similarly, the aggregate cost method would produce a proper normal cost." But, then, a few paragraphs later, we are told: "While there is only *one true cost*, there are many standard costs . . . de-

[3] This question does not fit the Trowbridge and Griffin items, the former being more of a mathematical development and the latter a statement presented orally and, hence, especially "groomed" for the visual audience's understanding.

pendent on the choice of actuarial . . . methods. . . ." This juxtaposition of excerpts seems to show a conflict, but may be only a paradox explainable by the author; in any event, I got lost, and I wonder how the accountant would fare?

Am I quibbling on these terminology difficulties? Or is there a real dilemma under pension papers we are writing? If so, what is the cure? Can the committees on papers of the applicable actuarial organizations be expected to rearrange definitions or search out anomalies in their use? I fear not, for the task would be too time-consuming. Would the following offer any measure of correction? Do not set up any definitions at all in their usual opening niche. Write the paper with the description or meaning of a term carried out in the running text, and, if a term is to be used too frequently to repeat this procedure each time, add to it, when first used, a parenthetical designation or symbol to be similarly appended to the term thereafter. Wherever possible, use terms and their meanings which appear to have the weight of prior usage, or which have been approved by a recognized terminology committee.

It would be interesting to see what an existing paper, with numerous definitions, would look like if redrawn on the caveat, "An author on pension funding should avoid setting forth a list of defined terms."

I had intended to discuss several of the substantive portions of Mr. Bassett's paper, but I have used up so much of the time at my disposal with this "terminology" discourse that I must be very brief in what follows. Most pension actuaries have a reasonably good understanding of the activities and purposes of the C.P.A. committees with respect to their favoring "accrual accounting" along the lines described by Mr. Bassett under that heading (I understand no official accounting bulletin has yet appeared and that many C.P.A.'s may not agree with the idea). To nonpension actuaries the details and implications of the proposal may come as somewhat of a shock. For the edification of both groups—the *cognoscenti* and the uninformed—I am sorry the author did not explain (i) the nature and force of such bulletins on subsequent accounting practice and (ii) how much of a role company managements (employers) have had in the studies of "accrual accounting" in the form that seems to be shaping up for an official bulletin. The accountants and the actuaries have had primary and secondary parts, respectively, in the development to date, but how about the party who is chiefly affected, the companies themselves—their experts, officers, boards of directors, and stockholders? A few words about the part which has been, or may be, the real protagonists—beyond the author's mention of their views on *present* practices—would have added to the paper.

1. *Why just pensions?*—The accountants seem to confine their theories and proposed practices to *pension* costs. Are there not other expenses under the same accounting concepts which admit of a similar recasting into a "true cost" (Bassett) differing in some years from that actually paid? How about employer group life or health benefit costs, especially aimed at after-retirement protection? And why not consider another *pension* program, social security, the taxes (contributions) of which increase hereafter under the Act (if not higher); why not also levelize this company pension expense by having a "true tax" computed and charged to operations?

2. *What lies ahead?*—Under the potential accounting requirements described in the paper, pension funding would seem headed for more and more complexities; such as (i) requiring two or more concomitant types of actuarial valuation for the same plan; (ii) setting up a gamut of new question-raising pension items for a corporation's annual statement; (iii) explaining to unions why a company's actual contribution, when higher than the "true cost" by the company statement, should not cause an increase in benefits of the plan or, if the reverse, becoming concerned about the lower contribution; and (iv) explaining to IRS why actual contributions in excess of the alleged "true costs" should be tax-deductible. When rapport with accountants requiring all this is reached, what may the next complexities be—might they involve some "overlay" of governmental requirements for even different methods and greater details of information? I sometimes wonder whether the engine which manufactures pension-funding devices may not of late have developed a runaway flywheel; certainly, the machine is not yet[4] automated to cause technological unemployment of accountants and actuaries!

J. STANLEY HILL:

Mr. Bassett has done our profession a considerable service by lifting us far enough above the trees of our technical concepts that we may view the broader landscape of business considerations. This discussion proposes to explore this landscape from perhaps a still greater altitude. It is concerned primarily with the funding concepts usually applied to Mr. Bassett's Group 5 plans. It is based on the proposition that traditional funding concepts are too heavily oriented in technical traditions and not sufficiently oriented in normal business concepts and the best interest of the employer. It proposes an approach to pension funding which should be more understandable and acceptable to the employer—yet no less sound—than traditional approaches. It might even go some distance toward

[4] This is an important word, in my opinion.

resolving the apparent conflict of opinions between actuaries and accountants.

The employer who has just adopted (or liberalized) a pension plan has committed a significant amount of future (and perhaps past) earnings to the benefit of his employees. In return he is entitled to:

1. Get as much "mileage" as possible through the understanding and good will of the employees.
2. Understand the alternatives open to him in the funding of the plan in terms of the advantages and constraints related to
   a) Taxation;
   b) Cost of capital versus net return on the fund;
   c) Solvency of the fund and cash flow;
   d) Capital needs and capital availability in his business—present and future;
   e) Morale effect on employees of a well-funded plan;
   f) Lack of liquidity (i.e., irrevocability) of the fund under an approved plan; and
   g) The public relation values of level funding.
3. Choose the optimum funding pattern which maximizes the advantages, minimizes the costs, and lies within the necessary constraints.

His business decisions are only as good as his understanding of the problems. It is essential, therefore, that the problem of pension funding be explained in his frame of reference.

How much will the plan cost? From the employers' point of view the answer is most meaningful when stated as a percentage of total salary—even though the employer may not choose to fund it that way. The more nearly level this percentage remains, the more valid will be the answer. To make the best estimate of this cost, the actuary must understand as much as possible about the probable future trend of the business so that he may choose wisely the assumptions not only regarding turnover, mortality, and salary scales but also the future growth of the staff and the trend of its composition by age and sex.

How should the plan be funded? Now the fun really begins, since it will tax the best efforts of the employer, the actuary, and the accountant (plus a tax counsel if he is separately retained).

The approach to the funding problem might go like this. After a discussion of the broad considerations (outlined above), the rate of funding might be discussed. This is a good opportunity to discuss the investment values in early funding. The employer may be inclined to compare the rate of return on his funding payments with the rate of return on alternate forms of capital outlay. Unless the employer is approaching a potential debt limit, it is more valid to compare this rate with the cost of obtaining capital—a figure probably already provided by the accountant.

The approach will differ depending on circumstances, exemplified by the following cases:

Case I.—If the net return on the fund exceeds the cost of capital, the employer should fund as rapidly as he can and still receive full tax credit and let the niceties of accounting principles be covered by a footnote in the annual statement. Maximum tax deduction effect on debt ratios and irrevocability of the funding payments then become the constraints.

Case II.—If the cost of obtaining capital exceeds the net rate allowed on the fund, the constraints are found in the considerations outlined in 2*c* and 2*e*. In this context the regular annual funding amount may be—in fact should be—an amount substantially lower than the level percentage determined as the cost. Otherwise the employer is paying too high a price for the privilege of meeting certain arbitrary standards. If the plan is valued annually, a suitable formula for determining current contributions might be

$$\text{Current Payroll} \times \frac{\text{(Present Value of Benefits to be paid from Fund over next } n \text{ years)} - \text{(Present Value of Employee Contributions over next } n \text{ years)} - \text{(Current Balance in the Fund)}}{\text{Present Value of all Salaries and Wages over the next } n \text{ years}}$$

when n is the integer, not greater than 10 which produces the largest contribution. At this point the fund should be projected to determine whether it is sufficient to cover the vesting requirements over the same period. If it does not, this aspect should be discussed.

If the plan is valued less frequently than annually, it may be desirable to increase the ten-year "look-ahead" to avoid undue fluctuations in the annual contribution.

Simply stated, why should a capital-starved employer fund his pension plan any more rapidly than is necessary to produce an orderly provision of the benefits which he has contracted to provide? Once again, the niceties of accounting principles can be dealt with in a footnote. If the note is properly worded, the stockholders will respect the business acumen behind the decision.

It should be emphasized that Case II should cover only a minority of smaller employers with poor capital positions. The meager funding suggested in these cases should not materially affect the growth of pension fund assets in the aggregate.

Case III.—There may be cases where other considerations outweigh the investment or capital approach. Consider, for example, a charitable institution whose principal contributors have very definite notions as to how a pension plan should be funded.

Case IV.—Life insurance companies (in their dual role of employer-insurers) represent a special case—or even a family of special cases:

A company in Phase I only or Phase I and II should fund its plan as rapidly as logic permits. If the money is available, it could fund enough immediately so that future annual payments would not be expected to exceed the percentage of payroll applicable to 25-year-old entrants.

A company in Phase II only will be governed by the considerations of Cases I and II.

A company which oscillates between Phase I only and Phase II only will want to retain flexibility in its funding to help level out its fluctuations in earnings.

A company which oscillates between Phase I and II and Phase II only will want to retain flexibility in its funding to help produce the *maximum* fluctuations in earnings, since it pays only 25 cents tax on each dollar of earnings on the "up side" but recovers 50 cents per dollar on the "down side."

After it has been determined which case fits the employer, a discussion of the applicable constraints should follow. When the actuary has these clearly in mind, he can retreat to his office. With the aid of a computer, he can determine the optimum funding pattern. If he has reservations about any of the constraints, he may wish to prepare projections on one or two alternate patterns.

It may be argued that this approach encourages lack of conservatism in funding. The actuary still has opportunity to stress the virtues of conservatism, but the final decision properly rests with a well-informed employer. By approaching the problem from the employer's point of view, the actuary will enhance his effectiveness considerably without sacrificing any of his fundamental obligations to choose his assumptions wisely and weigh future contingencies in the balance of educated caution.

JOHN HANSON:

As I understand it, the objective of all accountants is to match pension costs and revenue in the time period to which they both relate. Lacking a common definition of pension costs, however, some accountants argue for level premium charges, so that the total cost will have been provided when compensation terminates; others for unit credit charges, so that the annual cost will relate most closely to the benefits accruing each year; and others for full amortization of the past-service cost. These approaches are not an attempt to attain the stability of Mr. Bassett's "true cost," and he is apparently in error when he says the accounting profession "generally takes" the position that his stable true cost should be charged to operations each year. I shared this error two years ago when I was writing "Funded and Unfunded Provision for the Cost of a Pension Plan," a paper presented last month, with modification on this point, to

the Conference of Actuaries in Public Practice. Like Mr. Bassett, I argued that normal cost and interest on the unfunded past-service cost—referred to below as "normal cost and interest"—is the true cost of a plan that continues indefinitely, and the greatest uniformity and comparability among employers would result if all charged such amounts. I have discovered, however, that most accountants, when questioned on this point, indicate that uniformity and comparability, of themselves, are not sufficient justification for anything.

Normal cost and interest under the entry-age-normal cost method will completely fund the accrued benefits for some initially immature groups of employees, and Mr. Bassett's "Standard Cost," which he defines to be normal cost plus the level amount needed to fund all accrued benefits, must for general application to such groups be interpreted as the normal cost "plus or minus" an additional level amount. Also, the stable annual cost to fund all accrued benefits by a specific future date is not related to the normal cost, and I believe accrued benefits should be valued with appropriate assumptions, for example, no turnover, if they are to be considered "fully funded."

It may be, as Mr. Bassett asserts, that his "true cost" can never be determined; however, if it is to be on "the most probable basis," as he suggests, the best estimate is obviously normal cost and interest. Since his "Standard Cost" changes sharply at the end of the amortization period, it is less stable than normal cost and interest, and justification of it "to meet the objectives of the auditors in regard to stabilizing the charge to operations" is logical only under the additional premise that the unit credit past-service cost should be charged in full. I challenge the traditional view of many pension actuaries that there is some inherent virtue in full provision for the past-service cost. Also, I question whether we can defend, on a scientific basis, the notion that the total cost provision at any time can be the accidental result of the actuarial cost method chosen. Regarding this latter point, I believe we should, for the benefit of accountants, distinguish between the unit credit and the entry-age-normal past-service cost. Without precise terms, there can be no dialogue, no communication, and no sound solution to this problem, which involves complex actuarial and accounting aspects.

In my discussion, I review two basic ideas: (1) the group nature of the past-service cost—as an actuarial value that never disappears and which, for a mature group of employees in service, would never change if the benefit accruals were the same each year—and (2) a concept of pension costs based on the accounting premise that there can be no cost without a benefit to the stockholders. Some accountants seem to feel, intuitively,

that pension costs are really "compensation costs," but it seems to me that this is a false premise.

Accounting Research Bulletin 47 and some recent accounting treatments suggest that the "past-service cost" should be fully charged, even if not funded. However, they do not define the accounting objectives clearly, and they show no insight into the group nature of actuarial values. I believe this suggestion of full charges is a bad one. Let us examine the results of this suggestion under a plan with an unfunded unit credit past-service cost of $2 million and a fund exceeding by $\$\frac{1}{2}$ million the value of all benefits accrued by employees with a vested right at termination of employment. Under this plan, contributions equal normal cost and interest, and a projection indicates that, in twenty years, the unfunded of $2 million and the fund excess of $\$\frac{1}{2}$ million will not have changed. They will, of course, be with respect to a later generation of employees. If the $2 million were charged to operations over this twenty-year period, earnings would be decreased by $100,000 per year, and there would be a $2-million liability on the balance sheet at the end of twenty years. Thereafter, charges would equal contributions, the balance-sheet liability would never disappear, and there would be no increase in future earnings to compensate for the decrease in earnings currently.

To what end? The stockholders could object to such added provision on the grounds that the funds currently exceed a reasonable funding objective by $500,000. Moreover, the investment analyst would be likely to underestimate the future earnings potential of the company and could misinterpret the balance-sheet liability to mean that the plan was not adequately funded. Again, I repeat, to what end? Certainly, the burden of proof should be on those who advocate these results.

I do not believe that actuaries should acquiesce in such full charges of the unit credit past-service cost if they do not know what accountants are attempting to accomplish and there is no consensus on this score among accountants. For example, even though all accountants currently attach more importance to the income statement than the balance sheet, many object to a balance-sheet liability such as the one described above, because it would never have to be funded, in whole or in part. If actuaries do acquiesce in such full charges, they are taking sides in an accounting dispute which I believe should be settled by accountants. Mr. Bassett's paper is a constructive addition to the actuarial literature, and my principal criticism is that the casual reader might believe he acquiesces in such full charges, whereas in fact I do not believe he is taking a position on this point.

Some confusing terms.—Considering the pension fund as an independ-

ent entity, and assuming that it will continue indefinitely, the actuarial value of all "accrued benefits"—meaning the prospective pensions accrued by employee-beneficiaries based on past services at any time—may with some justification be termed an accrued "liability" of the fund at that time. Unfortunately, however, this term has been used indiscriminately, with the result that the "past-service cost" is often considered to be a liability of the employer, which it is not in any generally accepted sense of the word.

Mr. Bassett does us a service by using the term "past-service cost," although even this term can be misleading, since it is generally accepted by accountants that all pension cost of the employer is associated with the fiscal periods following the adoption of the plan.

Adding to the confusion, the term "past-service cost" (or "accrued liability") is often used under both the unit credit and the entry-age-normal cost methods, the two most common methods, for essentially different actuarial values. Under the unit credit method, the "past-service cost" at any time equals the actuarial value of all accrued benefits, as defined above. Under the entry-age-normal cost method, the "past-service cost" at any time equals this unit credit past-service cost plus the "deficiency in future entry-age-normal costs," and this deficiency equals the excess at that time of (*a*) the actuarial value of benefits expected to be accrued *in future years* over (*b*) the actuarial value of entry-age-normal costs expected to be contributed *in future years*. In other words, the entry-age-normal past-service cost, at any time, equals the unit credit past-service cost at that time plus a quantity related exclusively to the future. An understanding of this relation between these two common cost methods is essential, I believe, intelligently to consider some rules that have been proposed for allocating the pension cost of the employer to the appropriate fiscal periods.

Group nature of the past-service cost.—As illustrated algebraically in Appendix 2 of "Funded and Unfunded Provision for the Cost of a Pension Plan," normal cost and interest contributions will maintain the funded age that then exists when a group of employees in service is mature. (Accrued benefits are fully funded for all employees at and above the "funded age," including retired employees, but none is funded for employees under the "funded age.") That is, normal cost and interest in any year, computed with respect to all the employees of such a group, is equal to the sum of (*a*) the actuarial value of all accrued benefits, computed only with respect to employees who, in that year, reach the funded age, and (*b*) the actuarial value of the benefits accruing during the year, computed only with respect to the employees above such funded age.

This above relationship is a reminder that, because actuarial assumptions have no validity with respect to individual employees, actuarial values in general and the past-service cost in particular are not determined for the employees individually. They are, rather, a property of the plan and a function of the mass of employees moving through the plan over the years. Accordingly, contributions are not made with respect to specific individuals, and the fund, so long as the plan continues, is neither divisible among nor attributable solely to the employees considered currently for the actuarial calculations.

The above prepares the way for two pertinent insights. First, full funding of benefits for retired employees and of accrued benefits for all employees in service above a funded age may be maintained without contributing amounts calculated to fund the past-service cost by a specific future date. Second, assuming the same benefit accrual each year, the past-service cost for a mature group of employees in service will never change in amount if the size of the group remains constant; that is, the past-service cost computed in ten years or in a hundred years with respect to a later generation of employees will equal the past-service cost computed initially with respect to the employees on the effective date. In brief, the past-service cost will never disappear, and it does not indicate the fund level needed for benefit security.

Treatments of this subject which define the "past-service cost" to be related only to benefits accrued prior to the effective date do not come to grips with this important actuarial concept.

A concept of pension costs.—In the October, 1963, issue of the *Journal of Accountancy*, Eric Kohler asserts that transactions are the "raw material of accounting," and it is significant that the employer's contributions are the only pension transactions of the employer. The prior accrual of a pension benefit does not appear, of itself, to be a transaction of the employer to be recognized by an accountant, and the subsequent payments of benefits are transactions of the pension fund.

An accounting objective, of course, is to match costs and revenue in the time period to which they both relate. In this regard, my understanding is that there must be a benefit to the stockholders in order to incur a cost, and the references to this subject in *Research Bulletins No. 47* and *No. 36* are reviewed below.

In *Bulletin No. 47*, the Committee on Accounting Procedure stated that all past-service as well as current and future service costs are "costs of doing business, incurred in contemplation of present and future benefits," and "the length of the period benefited by costs based on past services is subject to considerable difference of opinion."

In *Bulletin No. 36*, the benefits "flowing from pension plans" were discussed in the following paragraph:

> The committee believes that, even though the calculation is based on past services, costs of annuities based on such services are generally incurred in contemplation of present and future services, not necessarily of the individual affected but of the organization as a whole and, therefore, should be charged to the present and future periods benefited. This belief is based on the assumption that although the benefits flowing from pension plans are intangible, they are nevertheless real. The element of past services is one of the important considerations of most pension plans and costs incurred on account of such services contribute to the benefits gained by the adoption of a plan. It is usually expected that such benefits will include better employee morale, the removal of superannuated employees from the payroll, and the attraction and retention of more desirable personnel, all of which should result in improved operations.

The ideas in the above paragraph are as useful today as they were when *Bulletin No. 36* was issued in 1948. Not only does the description of such benefits accord with the group nature of actuarial values but the bulletin also suggests the three major ways in which the employer can be benefited by the adoption of a pension plan.

Of these, the "removal of superannuated employees from the payroll" is especially pertinent in the present era, because the elimination of jobs of elderly workers as a result of automation has become commonplace in recent years, and the added pension cost incurred to facilitate the early retirement of such employees is often substantial. Such pension cost, it would appear, is incurred in large measure in lieu of the compensation costs eliminated by automation and might reasonably be charged, therefore, to the fiscal periods benefited by automation.

The retirement of an employee so that his work can be performed more efficiently—by man or machine—obviously benefits the period after retirement to some degree. Consequently, the reduced earnings or the increased prices that would result if all pension expenses were charged to the years prior to retirement may be unfair to the stockholders or consumers during such years.

Although pay-as-you-go contributions will enable the employer to benefit from the "removal of superannuated employees from the payroll," a reasonable program of advance funding would appear to be necessary if the employer is significantly to benefit from "better employee morale" and "attraction and retention of more desirable personnel." (This may not be true if pay-as-you-go benefits are backed by corporate assets in lieu of a pension fund.) In the present era, where disclosure of financial commitments is required, and employees and their representatives are

becoming increasingly sophisticated with respect to pension benefit security, it is doubtful that the employer can or should expect the same benefit to flow from the unsecured promise of a pension accrual as from an advance funded plan.

Most of the pay-as-you-go plans in existence today are plans of employers in financial difficulties who do not have funds available to increase their pension commitments in order to provide security to employees in this area. Under such circumstances, where the permanence of the business is likely to be doubtful, a former employee receiving—or an active employee anticipating—pension payments that are not secured by a pension fund may have little or no reason to view the pension as more than a gift.

Also, pay-as-you-go plans have sometimes been adopted by young, growing companies that have chosen to use funds for expansion, but even in such circumstances the employer should not expect to benefit to the same extent under a pay-as-you-go plan as under an advance funded plan, especially after the end of the period of rapid growth.

It would seem logical to assume that the employer can benefit over the years only to the extent of his contributions and that the employer benefits over the years following the date of pension accrual, not only with respect to accrual of past-service pensions—as suggested in *Bulletin 47*—but with respect to accrual of future service pensions as well. He benefits in those years and to the extent that he puts up the funds that give substance to the pension benefit expectations.

Considering the sophisticated employee who is benefiting the employer in consideration of a long-range program of advance funding, it is reasonable to suppose that this benefit to the employer will not be affected merely because, in some years, the contributions fluctuate above and below the long-term contribution level. Accordingly, charges that level out the contributions in order to maintain consistency and prevent distortion of earnings from year to year would appear to be appropriate.

Under this concept, the accounting method would be based on an acceptance of the employer's anticipated long-term contribution level as the cost of the plan, and the charge to operations in any year would equal the contributions in the year, or the average contribution over short periods of years when appropriate for consistency with the long-term contribution level. (For example, assuming a long-term annual contribution of $\$N$, if the employer contributed $\$2N$ in one year and nothing the next, the charge would nevertheless be $\$N$ each year.) Regardless of the long-term contribution level, this method would not result in a permanent liability on the balance sheet of the employer. It is a conservative depar-

ture from the historical practice of charging the amount actually contributed each year and, in my opinion, is fully justified.

Other concepts.—Although contributions in excess of pay-as-you-go amounts are made prior to retirement and resemble compensation in some respects, the characteristics of pension costs are nevertheless both unique and singular. Intuitive classifications of pension costs as "compensation," or as a special kind of some other familiar concept such as "human depreciation" or "employment costs," appear to be oversimplifications which may lead to erroneous accounting treatment. Moreover, assertions that pension costs are something else are a poor substitute for understanding and defining pension costs.

FREDERICK P. SLOAT:

Mr. Bassett has given us a very fine presentation of the status of present thinking in respect to accounting for pension plan costs. I had the opportunity to review it while it was in preparation. I have also had occasion to examine it with accountants from several large accounting firms. My comments are aimed at pointing up a few aspects covered in the paper.

Mr. Bassett implies in various statements that the accounting profession has a unanimous viewpoint. Such is not the case, any more than it can be said that actuaries speak with one voice. In most instances, where reference is made to what the accounting profession feels or states, it should be understood as the opinion of many accountants.

There are, however, some basic concepts on which the accountants have broad agreement—just as actuaries have in certain fundamental areas. One of these accounting concepts is involved in a key statement in Mr. Bassett's paper:

> Others, particularly accountants, feel that present practices distort corporate financial statements in that companies have a choice in the amount to be charged to operations during the year. Thus a company wanting to show increased earnings may be able to do so by eliminating their charge to the pension plan entirely for a given year.

All accountants agree on the principle of *consistency* in a company's financial statements from year to year and apply the measure of *materiality*. Another widely accepted principle is the *accrual basis* of accounting. On the other hand, the principle of *comparability* between companies is under considerable discussion by accountants.

While the research study, nearing completion by the American Institute of Certified Public Accountants, reflects a general accounting opinion that the actual contributions to the funding of a pension plan are not

necessarily the proper amounts to charge to operations, some accountants feel that disclosure through footnotes is the desirable approach. This research is being done for the Accounting Principles Board of AICPA, who are the ones who will decide upon any accounting principles to be established.

One problem in respect to the discussion of pension accounting is to avoid confusion between matters involving funding and those involving accounting charges. In Mr. Bassett's paper, as elsewhere, references to funding are not always fully applicable when applied to the accounting aspects, and vice versa.

There is considerable difference of opinion as to the necessity or desirability of meeting all the unfunded prior-service cost—particularly if, under the actuarial cost method used, the funds (or the total amounts accounted for to date) equal or exceed the value of all benefits to date. The desirability of setting up further amounts toward the unfunded prior-service cost may differ when considering funding than when considering the accounting charges to operations. It is more likely to be deemed necessary in the latter area. It may be noted that the assumption that a pension plan will continue indefinitely in the future (the "going-concern" principle) does not necessarily warrant the assumption that the plan will not be terminated at any time.

In his conclusion, Mr. Bassett notes that the actuary should review, with the company and its auditors, the actuarial assumptions and method he recommends and the reasons therefor. Five years ago, before my close affiliation with accountants, I assisted an accountant for another firm in the preparation of a paper for his fellow accountants, entitled "Auditing with the Actuaries." In it, he briefly reviewed the subject of actuarial assumptions. In the paper he included the following:

> CPA's do not act as professional lawyers, or chemists or engineers. But they do in the course of their work read legal documents, observe that clients' chemists do test materials and products, satisfy themselves as to the procedures employed by engineers in surveying stock piles, etc. . . . In the same sense, toward the end of arriving at an informed judgement relative to pension matters, CPA's can do a more businesslike audit job . . . once a greater understanding of the actuarial science is attained.

This indicated that, just as actuaries delve into accounting and legal matters in some depth without thereby becoming accountants or lawyers, auditors should be informed on actuarial matters without thereby becoming actuaries.

HOWARD H. HENNINGTON:

Mr. Bassett's paper concerning accounting for pension plan costs is a valuable and timely contribution. I would like to discuss the distinction

Mr. Bassett makes between standard cost and true cost and also make some observations on further implications present when there is an asset or liability item arising from contributions actually made under the plan different from the accrual cost.

The paper describes the theoretically true cost which, if continued in perpetuity, would mean that all commitments of the plan would be made. Accrual accounting is then described as that under which the estimated true cost of the plan is charged in the financial statement regardless of the actual contributions made under the plan. The true cost is then defined, using most probable assumptions as equal to normal cost plus interest on the unfunded prior-service cost.

Mr. Bassett then proceeds to a discussion of "standard cost." The concept of standard cost is introduced by referring to the fact that "most corporations, their actuaries and auditors" (I am not so sure about the auditors, who are more concerned with accounting than they are with business management), would recommend making contributions toward the funding of prior-service cost. There is also a reference to the fact that, if the plan ever terminated, benefits would be lost to some extent unless prior-service costs were funded. All these references at this point in Mr. Bassett's paper concern actual contributions rather than accounting costs. Mr. Bassett now passes to the suggestion that the "standard cost for accrual purposes" should be the true cost plus costs necessary to fund the plan over n years. This seems inconsistent with the prior definition of accrual accounting in terms of true cost alone. I am thoroughly in agreement that the *actual contributions* to the plan should provide for funding prior-service cost, but I do not see the *necessity* of including in the accrual cost a funding of prior service.

Mr. Bassett makes abundantly clear that the true cost is a theoretical figure which can only be estimated and which involves a good deal of judgment on the part of the actuary in the course of selecting actuarial assumptions, the funding method, and the funding group. With the necessary latitude that is implicit in this judgment, it seems to me appropriate to give corresponding latitude in connection with the degree to which the acrual cost should include costs for amortizing prior-service liabilities. My specific recommendation, therefore, would be to permit the accrual cost to range from normal cost plus interest only on prior-service cost to normal cost plus amortization of the prior-service cost on a 10 per cent basis as selected by the corporation and the accountant.

Mr. Bassett discusses the asset or liability on the balance sheet which arises when contributions actually made to the plan differ from the accrual cost. It is worth noting that the accrual cost should probably

include an adjustment for interest on any such asset or liability in the balance sheet at the beginning of the year. There is also another obscure point as to whether the true cost should be determined as the normal cost plus interest on the unfunded prior-service cost or the normal cost plus interest on the full prior-service cost (regardless of the extent to which it has been funded). This seems to require further study, but my inclination is to define the true cost (before the interest adjustment for any asset or liability item) in terms entirely independent of what funding has actually been accomplished.

I agree thoroughly with Mr. Bassett's basic conclusion that the question of whether or not accrual accounting is to be used in a financial statement is a question to be answered by a corporation and its accountant. The actuary should be ready to accommodate his work to the decisions made with respect to the financial statement.

BLACKBURN H. HAZLEHURST:

Mr. Bassett indicates that, while most employers have no legal obligation under pension plans beyond their actual cash contributions, many accountants argue that, "since it is more likely that the plan will be continued, . . . proper accounting requires that the charge to operations be on a more realistic long-range basis."

This reasoning that "probable" long-range financial implications should be reflected in the statement, as opposed to limiting charges to legal liabilities, is easily extended. For example, most corporations in the United States do and probably will continue to supplement social security benefits, and the supplements fall in a reasonably predictable range. If this is true, perhaps an annual charge to operations should be made to meet at least the low end of this range: whether or not there is a benefit accrual under a formal pension plan; whether or not a contribution is made to a profit-sharing plan; and, in fact, whether or not there is any announced plan at all.

Meanwhile, there will probably be an increasing effort to find imaginative and successful ways to use profit-sharing plans as opposed to pension plans in order to avoid the apparently more "fixed" pension obligations, particularly in the case of companies with widely fluctuating earnings and/or with smaller surplus accumulations. This reaction may or may not be in the best interests of employees.

GEOFFREY N. CALVERT:

I think that the so-called true cost may be a rare and elusive thing to try to pin down. It may perhaps be a figment of the imagination of persons

in the accounting profession who may not understand the instability of these pension plans over a long period of time.

For example, many of them are upset periodically through bargaining, and most are affected by the periodic changes in the social security laws. They are also distorted and made obsolete by inflation as it affects both final-average earning plans and also career-average earnings and fixed-dollar plans. Their costs are also thrown out of adjustment by shutdowns of sections of a company, by mergers and acquisitions, and by changes in the investment climate which can affect cost figures radically at times. The mere process of aging of a company or changes in the industrial climate in which it operates can result in changes in pension costs relative to current payroll. All these things keep the average retirement fund in something of a state of turbulence if you look at it over a long period of time.

This "true cost" which Bassett talks about can exist, I believe, only in relation to a very, very stable situation over a very long period of time. I think that such a situation is extremely unlikely to exist over the sweep of time that is contemplated.

Another point I would like to make is that the reason why some methods for funding pension costs are chosen is that they permit flexibility to the employer, and, if that flexibility is taken away, the advantages of these types of pension funding are destroyed.

For example, if a man will retire in thirty years from now, you do not have to pay for one-thirtieth of that cost in every single year, so long as the total amount of funding necessary is done over the available period of time. You do not have to injure the corporation which has to bear the burden of the pension plan by putting it into a strait jacket; this would be a very serious thing to do.

I do not have too much sympathy with an idealistic or overtheoretical accounting approach which would tend to make financial success or survival more difficult for the employer who has to bear the burden of the pension fund. It is better for the financial health of the sponsoring corporation to be studied than to follow accounting principles which conflict with this, even though they may be desirable in other respects.

CLARK T. FOSTER:

Admiration is due Mr. Bassett for tackling a difficult, controversial problem. I wish I could agree with his recommended solution.

Not all problems can be solved, and this, like the problem of defining actuarial soundness in a pension plan, is perhaps one of them. Perhaps we should accept as a fact that, short of an overpowering new government agency not subject to the limitations of professional judgment, nobody

is likely to devise an "instant" system that will permit a reliable comparison of pension costs among corporations. Pension costs are the end product of a complex branch of the profession, and it seems futile to expect that they can be meaningfully compared without professional analysis.

Evidence of the weaknesses of accounting rules appear a number of times in Mr. Bassett's paper. Take, for example, the obvious difficulties recognized in the suggested groupings. Group 5 seems to be singled out for attack, requiring the special actuarial certification for these accounting purposes. A level long-term cost unaffected by current experience is suggested as the requirement here, whereas in Groups 3 and 4 the acceptable cost is the insurance company's gross premium less dividends and credits. How can contributions on these two bases be intelligently compared?

In Group 1—industry-wide negotiated plans—the cost is the negotiated cents-per-hour because this is the "complete liability" of the company. Why is this any more "complete" than the actual rate of contributions under any other plan which is within the power of the company to amend or terminate? Is the minimum funding contribution of a collectively bargained plan more likely to represent the ultimate cost of the plan than a corresponding minimum arrangement in a unilateral cosponsored plan?

For Group 6 it is implied that the terminal funding or pay-as-you-go cost is satisfactory. This is certainly not comparable to a Group 5 cost and would not be helpful to curious stockholders.

The paper strongly implies that a long-term estimated cost is the only satisfactory charge to operations—except in the various groups where it is not required. Even in Group 5, I wonder why this must be accepted. Why is a unit credit cost for a young company not a reasonable charge to operations? Granted that such costs are likely to increase, so are group life insurance costs and so is payroll. So, in fact, are profits. In a young enterprise, building for the future, why is it not reasonable to limit the burden on operations to a relatively low pension charge?

The paper suggested that a summary of plan provisions would be wasted in the annual statement. I agree; yet how can the stockholders judge the significance of the suggested pension charge without it? The charge is to be the best possible long-term cost estimate, even anticipating social security increases. But it is not to anticipate benefit increases. Is it not likely that a benefit formula will be changed before a plan matures to the point where long-term costs are current costs? Is it not likely that a minimum benefit plan will be increased before a generous one? Is it not possible, in fact, that a company with no plan is likely to adopt one soon and should, therefore, charge its operations with an ultimate cost for this

potential plan? Is it not a reasonable extension of the theory that every corporation should charge operations with the ultimate costs of its ultimate plan?

The problem I say, should have no prescribed solution. Suggestions such as Mr. Bassett's produce additional figures but not necessarily better ones. To develop them seems to create unnecessary expense for American industry.

It is clear that the accountant has a legitimate interest in a cost item as major as pension expense. The stockholder should be alerted to distortion of costs or material inconsistencies. Would it not be sufficient for the accountant to note in his formal opinion, if pension costs change materially from one year to the next, the reason for the difference as explained to him by the actuary?

RICHARD DASKAIS:

My discussion is limited to the paper's Group 5 and Group 6 plans. Practical considerations leave little room for argument with the suggested handling of Groups 1 through 4.

The paper defines "contributions" and "funding" in a broad sense to include charges for book reserves, in order to develop charges for accrual pension accounting. For the purpose of funding all accrued benefits, contributions and funding must be considered in a conventional sense—that is, cash contributions and amounts actually in the pension fund, since, under most plans, the benefits employees will receive upon plan termination will depend upon the amount actually in the fund and not upon the contributions charged on the company's books. The use of standard cost, rather than estimated true cost, as an accrual accounting charge appears to be based upon (1) considerations of employee benefit security, which I believe irrelevant, or (2) a desire to have the balance sheet show no asset or liability when the plan has been funded (in a conventional sense) to the extent the accountant expects.

The adoption by auditors of the standard cost as a measure of accruing pension cost would establish a funding criterion based on benefit security which may be in direct conflict with provisions for benefit security in the plan or elsewhere. The paper states that the method of charging pension contributions "is a matter not for the actuaries but for the accountants and their clients to decide." Similarly, I think that it should be for the company to determine, independent of accounting considerations, the extent to which benefits should be secured.

If an auditor believes the income statement is more important than the balance sheet and uses accrual pension accounting, there should be no

objection to the balance-sheet asset that will result when the company charges estimated true cost but contributes more because of benefit security considerations, income-tax advantages, or other reasons. Such an asset would have no value to the stockholders upon plan termination but would have value as long as the plan continued; on most companies' balance sheets there are other assets which are of little or no value if the purpose for which they are held disappears. It seems the auditor must make his choice between the balance sheet and the income statement.

(AUTHOR'S REVIEW OF DISCUSSION)

PRESTON C. BASSETT:

I am very pleased that so many actuaries have taken the time to comment on my paper. It is also satisfying that many of the papers supplement or concur with the proposals. Rather than comment on each of the discussions, I have singled out a few that I feel deserve particular emphasis. To comment on all of the discussions seems unnecessary.

B. Russell Thomas' comments in regard to when a plan becomes "fully funded" is a valuable addition. I certainly agree that all of us should make every effort to point out the true significance of "unfunded prior-service costs" to the accountants and others involved in pension funding. A fully funded plan should imply that the assets, valued realistically, are sufficient to provide the benefits credited to the employees. There may remain an unfunded prior-service cost if the liability for the benefits is valued on an entry-age-level method of funding. Russ Thomas states that payments toward the principal amount of prior-service cost will be discontinued when the assets of the pension fund valued at market are sufficient to purchase all accrued benefits from an insurance company. This concept of fully funded should be emphasized to those who are concerned about unfunded prior-service cost, disregarding the actuarial assumptions or valuation methods being employed.

I am indebted to Dorrance C. Bronson for bringing up the subject of terminology. Mr. Bronson cited several actuarial papers where various terms which have been used have different meanings. My comment to Mr. Bronson is that if he thinks this is confusing to the readers it may be more confusing for the writers. An author attempting to write on pension topics is up against a serious handicap when it comes to terminology. The words or phrases the author may have to use will mean different things to others, and thus it becomes necessary for him to define his terms carefully at the start. Even then, as Mr. Bronson points out, the author's concepts probably will be misinterpreted. I hope that Mr. Bronson's comment in regard to terminology will stimulate someone to do some work in

this area. This will help those both in and out of the actuarial profession to have a better understanding when talking or writing.

I was particularly interested in the comments by J. Stanley Hill in regard to the determination of the amount of cash contribution the employer should make to a fund depending on his financial condition and rates at which he can borrow money. I think it is well for Mr. Hill to remind all of us that it is not always best from a financial point of view to make contributions to a qualified fund. There certainly are circumstances when the cash could be used better in some other way. For example, none of us would recommend contributions to soundly fund a pension plan if it resulted in the bankruptcy of the company. However, cases less drastic than this are not so readily apparent to the actuaries in their zeal soundly to fund pension plans. Mr. Hill's paper deals with cash contributions which is a subject quite apart from accounting for pension plan costs on corporate financial statements. The "accrued cost" would still be charged to outgo whether or not any cash was actually set aside. For example, if the company could use the cash more advantageously internally, the same accrued costs would be charged to outgo, but the cash contributions would be zero. There would appear an item on the balance sheet for reserves set up for pension benefits. Thus the accounting cost is estimated independent of the determination by the company of the level of cash contributions.

Although last, it is certainly not the least important to me to thank the many other actuaries who helped in the development of this paper. Over the past several years I have served on the Committee To Study Pension Accounting. Many ideas were developed by the members of this committee which I have used in my paper. Also the members of the Committee have kindly reviewed my paper and given comments and suggestions. Thus my special thanks go to Frank Griffin, Howard Hennington, Charles Trowbridge, Fred Sloat, and Ralph H. Maglathlin.