TRANSACTIONS OF SOCIETY OF ACTUARIES
1959 VOL. 11 NO. 29AB

Pensions and Retirement Plans

A. How frequently should actuarial valuations be made of trusteed pension plans or deposit administration plans?

B. What do government regulations require as to reports on such plans?

New York Regional Meeting

MR. ROBERT A. WISHART, of George B. Buck, stated that as far as he knew there is no specific government requirement calling for an annual valuation. The individual internal revenue agent has a great deal of discretion and he must be satisfied that the contribution claimed is a proper one. Of course, the single purchase plans have to be evaluated each year because the regulations require that gains and losses during the year must be reflected in the given year or the following year. Some of these plans are set up under trusts, as well as other types of trustee plans.

In the past few years a majority of the clients have asked for an annual valuation to reflect recent variations including abnormal salary increases and Social Security changes. In view of the expense involved in pension programs and government regulations calling for an ever-widening area of disclosure, the time will come when most pension plans will be evaluated annually.

According to MR. GEOFFREY N. CALVERT, of Alexander & Alexander, Inc., the question of how frequently actuarial valuations of trusteed pension plans and deposit administration plans should be made could be approached from the basis of what is best to be done, or alternatively from the viewpoint of what is the minimum required under various government regulations.

His experience suggested very strongly that valuations of pension funds should be made annually in all cases. Industries which appear to be quite stable often turn out to be just the opposite, insofar as pension funding is concerned. He referred to the railroad industry, a very old mature industry where one would expect gradual change. Yet, the fact is that a technological revolution is going on in that industry, resulting in a very sharp reduction in the active employee groups. The recent development of pilotless rockets and missiles has brought about a tremendous redistribution of business throughout the aircraft manufacturing industry and between it and the electronics industry, resulting in rapid growth in some units and shrinkage in others. Everyone knows what has been going on in the steel and automobile industries. Even the apparently stable oil and paper industries have had problems of over-expansion, mergers, and the overhaul and bargaining of benefit plans, not to mention changes in funding methods.

Even where employment conditions have remained stable, temporary economic depressions and periods of prosperity cause tidal waves in the financial affairs of companies which are reflected in many cases in the annual amounts paid into pension funds. Within the pension funds themselves there have been numerous transfers from one funding medium to another. Bond values have shrunk, and bond yields have risen sharply. Stock values have expanded and stock yields have diminished. The whole balance of assets and liabilities has been quite radically changed by these internal factors alone. Social Security and railroad retirement coverages have changed, and no doubt will change again, upsetting the design and balance of benefits and employee contributions in many thousands of pension plans.

He believed that no actuary should take it upon himself to suggest that, in such a rapidly changing environment, it is either prudent or safe to regularly omit two, three or four annual valuations of a pension fund and to check the soundness and sufficiency of the fund, and of Company contributions, only every three, four or five years. It was his strong opinion that *annual* valuations should be made of all pension plans, regardless of whether trusteed or funded through deposit administration contracts, or both.

There are some serious misconceptions in some places as to the extent of savings in the cost of actuarial work which can be accomplished by making actuarial valuations only at intervals of longer than a year. In his experience, the wider the separation in time of successive valuations, the more costly is each valuation. Accounting methods evolve, personnel handling a pension case change, and after a certain length of time there is a loss of touch with the job done years before. When the revaluation time finally comes around again, the entire situation has to be restudied and there is much loss of motion as compared with an efficiently streamlined series of annual reviews. Further, opportunities to advise the employer currently as to new trends and developments are lost, so that the value of the actuary's advice tends to be less than if he is able to keep in close touch with the employer.

Directing himself to section B, Mr. Calvert noted that Section 404(a) of the Internal Revenue Code is concerned only with the maximum contributions which may be deducted for tax purposes. No minimum is specified. The Treasury minimum arises under PS 57, dealing with the effect of suspension or partial suspension in any year of employer contributions to a qualified plan. No question would seem to arise here provided the remaining unfunded liability does not exceed the initial unfunded liability, with certain adjustments. There seems to be no requirement that the liabilities must be calculated by a qualified actuary, or that the plan continues to be actuarially sound when all factors are brought into account.

Treasury regulation 1.404(a)-2(7) requires full disclosure, in the first taxable year for which a deduction from gross income is claimed under Section 404(a), of the methods, factors and assumptions used for determining costs, and also a summary of the resulting costs or liabilities in sufficient detail to permit ready verification for reasonableness.

This particular information need only be filed in subsequent years after the first if there has been any change in the bases or methods or if the Treasury specially requests the information. There is no actual requirement that a re-evaluation be made for each year.

The next paragraph, Section 1.404(a)-2(8), requires an annual statement of the applicable limitations for tax purposes and an explanation of the method of determining such limitations and a summary of the data and computations necessary to determine the allowable deductions for the taxable year.

Treasury Form 2371, which is a form for internal office use by the Treasury agent examining a taxpayer's returns, provides for the total accrued liability for service to the end of the taxable year to be shown and also the total assets at the end of the taxable year, the difference being the "unfunded cost remaining." It does not say how the treasury examiner is to determine the accrued liability or that it has to be based on actuarial computations. It is interesting to note that if the assets are valued at other than market value, the market values are to be shown lower on the same form.

The Welfare and Pension Plans Disclosure Act requires the annual report to include, among other things, a summary statement of assets, liabilities, receipts and disbursements of the plan. No guidance is provided as to how these liabilities are to be arrived at.

Exhibit B-1 attached to the annual report Form D-2, put out by the Department of Labor, would seem to indicate that the liabilities and funds shown in the exhibit are to be matched against the total funded assets of the plan. Item 17(a), "Reserve for Future Benefits and Expenses," is, however, merely a balancing item in the over-all exhibit, and seems in no way to imply that it is based on actuarial computations, or that the benefits already accrued have in fact been funded.

Item 12B of Part III of Form D-2 provides for a statement of actuarial assumptions used in determining contributions to a pension trust fund.

A copy of the latest actuarial report may be submitted instead, if it includes a statement of the actuarial assumptions, but this is not compulsory.

Question 12C of Part III asks for the amount of current and past service liabilities, without actually stating how these are to be determined.

In summary, there appears to be no requirement in the law or regulations which actually requires actuarial computations to be made at any specific intervals, and no statement which is required by law to be furnished can be regarded as giving a reliable test of actuarial solvency.

MR. JAMES A. HAMILTON, of The Wyatt Company, indicated that a proper answer to the section A question would be simply: "As rarely as possible but as frequently as necessary." In this country most private pension plans are valued annually. Some plans are valued at two-year intervals. In Canada triennial and quinquennial valuations have been somewhat more frequently the pattern than in this country, but the trend there too seems to be in the direction of annual valuations.

Many reasons could be cited why the annual valuation is a sort of natural frequency. There is the obvious analogy with the annual audit of the company. When firms are accustomed to an annual review of their financial operations accompanying the closing of their books, they are apt to think in terms of an annual valuation of the assets and liabilities of their pension plans. In making their financial plans for the coming fiscal year they wish to be apprised of the magnitude of annual contributions they may be expected to make under their pension plan. True, the mere application of last year's contribution factors to this year's employment level or to the payroll may produce a suitable figure and, if the company is not aiming at the highest amount it could treat as deductible or the lowest amount which will keep its plan solvent (however this may be defined), a level of contributions so determined might well suffice.

Notwithstanding, most companies seem to prefer to have their pension plan liabilities computed annually and compared with the assets implementing the plan, and their current contribution level redetermined accordingly. Just in case someone might infer that consultants find annual valuations much more profitable than, say, triennial valuations, it should be noted that a regular annual valuation costs considerably less than a triennial one. Furthermore, by keeping the actuary in closer touch with the pension plan it effects significant economies, by comparison with, say, a triennial valuation, in the consultant's work in connection with the administration of the plan.

Of course, there are many other reasons why annual valuations have become the general habit. The burgeoning of the pension movement since

1940 and the adoption of such plans by many companies in lines of business subject to a degree of instability with cyclical ups and downs, the expansion of many existing businesses into new lines or into new areas, the purchase of subsidiary companies, the many mergers with other companies that may or may not have their own pension plans, all emphasize the desirability of having available reasonably up-to-date actuarial valuations of pension plans.

Furthermore, many negotiated pension plans specifically require that an annual valuation be made, generally as of the anniversary date of the plan.

While the IRS does not require that a pension plan be subjected to an actuarial valuation annually, the mere fact that income tax returns are made annually, with the Section 404(a) responses (supporting as tax deductible, within limits, the employer's contributions to his pension plans) required as a part of such returns, stimulates the valuing of pension plans on an annual basis. The State Disclosure Laws and the Federal Disclosure Law (especially the annual informational Form D-2 of the latter) all will serve to strengthen the annual habit.

In some plans the major problem may be one of overfunding rather than the underfunding we used to fear some years ago. If the actuarial factors are chosen too conservatively or if there is a sudden drop in employment levels, the actuarial deficiency or past service liability may be liquidated at a pace which seemed scarcely possible at the start. Awareness of this situation enables the actuary to counsel management that their pension plan contributions might be curtailed to be used more advantageously elsewhere. In short regardless of whether a plan is long or short on its funding position continual actuarial surveillance seems essential and this can best be accomplished through regular annual actuarial valuations.

MR. JOHN K. DYER, JR., of Towers, Perrin, Forster & Crosby, Inc., observed that it is difficult for a consulting actuary to be objective in answering question A since he is in business to make a living, not triennially or quinquennially, but continuously. However, he had tried to be objective and had reached the conclusion that the question of whether annual valuations should be recommended hinges upon an appraisal of a number of conditions surrounding the specific situation. Among the conditions to be considered in arriving at a decision are:

a) *Type of Plan.* Pension plans containing features tending to cause major short-term fluctuations in liabilities should in general be subject to annual valuations. Examples of this type of situation are plans whose benefits are based upon final pay or final average pay rather than career pay, those with substantial disability benefits, and those with widows' pensions.

b) *Type of Group Covered.* In a group of employees subject to high turnover or fluctuations in rates of retirement, only annual valuations will bring out the cost trends which are important in determining funding policy.

c) *Funding Method.* If year-to-year actuarial gains and losses are a factor in the determination of annual contributions, an annual valuation is necessarily required. A fully funded plan on the single premium or level premium basis would be in this category. On the other hand, the use of the so-called "aggregate cost method" spreads gains and losses over future years, resulting in a relatively stable cost factor that might be used for several years without actuarial redetermination.

d) *Actuarial Assumptions.* If the assumptions are conservative, there is less need for annual valuations than if some or all of the assumptions are marginal or unconservative.

e) *Administrative Aspects.* If plan records are maintained on a current basis and reconciled annually, as is almost always the case with contributory and career pay noncontributory plans, the making of annual valuations becomes a natural and not particularly burdensome feature of the administrative process. As a matter of fact, if data are to be reconciled at all from valuation to valuation—and such reconciliation is almost essential if gains and losses are to be analyzed—there may well be an over-all saving in doing it annually rather than undertaking the major burden of tracing and analyzing the changes over a three or five year period at one time.

f) *Asset Structure.* If assets are subject to fluctuation in value, more frequent valuations of the corresponding liabilities are indicated than if assets are relatively stable in value.

g) *Tax Considerations.* A strict reading of the United States Internal Revenue Code suggests that annual valuations are required. However, there will probably be no problem in having less frequent valuations if the conditions are such as to permit the actuary to state with considerable assurance, on the basis of prior valuations, that tax deductible limits are not exceeded. Such conditions usually exist when the employer's funding policy calls for annual contributions considerably below the tax deductible limits, and where plan provisions and other factors are such as to make projections and estimates of liabilities reasonably dependable.

While these specifications seem to leave many cases where actuarial valuations less frequent than annual should serve the employer's needs, his experience has been that annual actuarial valuations are generally felt desirable. The cost of making these valuations annually is not great, once the procedure has been established, and provided there are no significant plan changes. It seems, at least in the United States, that most employers are anxious to have an annual look at their pension fund status, just as they like to have an annual audit of the corporation's books, an annual inventory, and an annual statement of financial condition. A factor which may be significant is the fact that life insurance companies are required by law to make an annual valuation of their assets and actuarial liabilities, and many reason that a pension fund should not be operated on a less conservative basis in this respect.

From the consulting actuary's standpoint (entirely apart from his economic interest) an annual valuation report is an annual opportunity to reeducate his client in the significance of the substantial contributions he is making for pensions, and of the growth of his pension reserves. Three or five year lapses often leave the actuary with the problem of starting this educational process from scratch, due to changes in personnel, lapses of memory, or both.

As to section B, Mr. Dyer thought that the information required by the Internal Revenue Service in connection with claims for tax deduction and tax exemption of pension trusts, or by the various disclosure laws as a part of their annual financial reports, are for a different purpose than the usual actuarial report to an employer. The consulting actuary should not be unduly influenced in the design or content of his reports because of these government requirements. The Department of Labor has suggested that in meeting the annual report requirements of the Federal Disclosure Act, the actuary's report may be submitted in lieu of the actuarial requirements as described in the Act. In general, he would oppose the use of actuarial reports for this purpose, certainly if the report contains any data or information that might be used competitively, by unions in collective bargaining, or otherwise to the company's detriment.

MR. LAURENCE E. COWARD, of William M. Mercer Limited, stated that contrary to the growing preference in the United States for annual valuations he sometimes had considerable difficulty persuading Canadian employers who had been having valuations once every five years that it might be a good idea to change to valuations once every three years. This applies not so much to the new plans and hardly at all to the union-negotiated plans, but rather to a number of the older Canadian plans.

He agreed that an annual valuation is desirable on general business grounds. Ideally, pension costs should be adjusted annually so that the employers' accounts reveal a true position. It also makes the actuary's job easier in tracing profits and losses, especially in dynamic situations. Annual valuations are not required by the government and some Canadian employers prefer not to have these figures annually. There may be several reasons and he noticed that in cases where the plan is conservatively funded, some employers desire to contribute the maximum; and where the plan is funded at a low level, some prefer to contribute the minimum. Apparently these employers see no particular advantage in having annual actuarial reviews.

Although he favored annual valuations as an ideal, the existing pattern in Canada calls for less frequent valuations.

MR. DONALD R. ANDERSON, Eckler and Company Ltd., endorsed the previous speaker's remarks, and distinguished between

a) a valuation similar to the annual valuation of a life insurance company, in which there is no intention of changing the actuarial basis, and in which there was only a routine review of experience,

b) a valuation in which a thorough review of experience was made with a view to overhauling the actuarial bases, and

c) an annual review of operations, centering around the financial statements and making use of other general data, but without actually performing a valuation.

Mr. Anderson thought that a type (*b*) valuation should not be undertaken each year, since year to year fluctuations in experience should not be taken into account in establishing valuation bases. In Canada, a type (*a*) valuation is often a waste of time, since sufficiently meaningful information can usually be obtained by a type (*c*) review.

Omaha Regional Meeting

MR. HOWARD H. HENNINGTON stated that consulting actuaries who discussed this topic at the New York regional meeting displayed substantial unanimity, with United States actuaries advocating annual valuations and Canadian actuaries advocating valuations every three to five years.

Speaking as a United States insurance company actuary, Mr. Hennington agreed that actuarial valuations should typically be made on an annual basis, this frequency being desirable from two main viewpoints. First, Internal Revenue Service reports are best established on the basis of annual valuations. This is supported by the IRS requirement for annual valuations of the securities held by a trustee. Second, changes in economic circumstances and changes in the experience can most satisfactorily be reflected by annual valuations before the effect becomes too severe.

The Equitable offers to make annual valuations under all of its deposit administration contracts and this is the practice in almost all cases. The few exceptions are at the employer's request. In some cases the employer costs are expressed as a percentage of employee contributions or of salary or in terms of cents per hour, so that there is an automatic adjustment for changes in the number of eligible employees. Other instances are where the deposit administration fund is a relatively minor part of over-all pension funding or where the employer is reluctant to go to the trouble of compiling data for the valuation. This latter instance usually reveals the need for a better record system.

MR. LOREN G. LOGAN stated that his company makes regular annual valuations on all its deposit administration plans and also on its combination plans except for a few past service funds which have frozen benefits and no new entrants. Rapid changes in the employer's staff and payroll, which are common in these times, make it prudent to conduct annual valuations, since an employer may accept gradual changes in annual outlays but sudden large changes are not well received.

Referring to the schedules called for in the regulations relating to Section 404 of the 1954 Code, Mr. Logan noted that while Schedule 7 (detailed description of cost assumptions) need be filed after the first year only if there are changes in it, the opinion in his company is that a full statement of cost assumptions should be included in every actuarial report. However, it is the practice in his company to prepare an actuarial report including only the bare information required for tax purposes. This is done because of costs and shortage of trained personnel.

MR. THURSTON P. FARMER, JR. indicated that the main purposes of an actuarial valuation of a trusteed pension plan are to determine contribution rates for the ensuing period and to check on the progress of funding. Corollary purposes are to summarize statistics of personnel covered by the plan and to compare actual experience with actuarial assumptions used in the valuation.

Legal requirements often dictate the frequency of actuarial valuations. If tax deduction is claimed under Section 404(a) of the Internal Revenue Code, annual valuations are required unless the cost is less than 5% of the compensation of employees covered, in which case valuations are required quinquennially. Even though not a specific requirement in the code or regulations, Mr. Farmer stated that the limitation on employee contributions would be difficult to calculate without a valuation. Plans covering public employees, however, are subject to the periodic valuation requirements as stated in the plan and actuarial valuations less frequent than annual are not unknown.

Mr. Farmer agreed with the others that in the absence of legal requirements the frequency of actuarial valuations is determined by the frequency of changes affecting costs. Such changes can be in either plan benefits or actuarial experience. When the frequency of valuations is left to the discretion of the actuary, valuations probably should be made at least quinquennially.

MR. JOSEPH H. DOWLING mentioned as a nonquantitative aspect of valuations the job of a consulting actuary to educate the employer to his (the employer's) responsibility to maintain the soundness of the pension plan. The frequency of valuations is thus controlled not only by changes in benefits and actuarial experience but also by the attitude of management toward the plan and their understanding of their plan and its cost implications.

Mr. Dowling listed three items which can affect the validity that may be attached to cost estimates made between accurate valuations of a plan. These are the degree to which the benefits being valued are affected by the assumptions employed (*e.g.*, effect of salary scale on final pay plans), the valuation method, and the stability of annual costs per employee or per dollar of covered payroll as affected by the size of the group.