

Retirement Plans—Investments and Interest Assumptions

- A. (i) Has there been a recent tendency to increase the interest assumptions in the valuation of pension plans which have been in operation for several years?
- (ii) Has the Internal Revenue Service requested that such increases be made?
- (iii) How may a reduction in the unfunded past service liability, resulting from an increase in interest assumption, be handled under current IRS Regulations?
- B. What formula methods are in use for gradual utilization of unrealized capital gains? In trustee plans, have the trustees' accounting problems tended to discourage changes?
- C. Under the frozen initial liability method, is it reasonable in some circumstances to apply realized or unrealized gains toward the unfunded past service liability? Has this been permitted by the IRS?

Philadelphia Regional Meeting

MR. ROBERT F. LINK: The Equitable has about 350 deposit administration contracts for which we perform actuarial valuations. Our normal practice, with modifications in individual cases, is to use assumptions for interest, mortality and expenses that follow the guarantees in the deposit administration contract. Where this practice is followed, several sets of assumptions will be in use at one time for the portions of the liability covered by the various existing deposit administration funds. Normally, we value the future contribution portion of the liability in accordance with the guarantees for contributions currently being made under the contract. This practice leads to a more or less automatic prospective change in assumptions whenever rates are changed. Since we have liberalized our interest guarantee several times in recent years, the answer to subsection (i) for the Equitable is "yes."

Note that this procedure does not change the valuation basis for liabilities covered by the existing funds. Such a change involves the implication that an upward change in funded liabilities would be appropriate in a period of falling interest rates, and such an upward change might be found inconvenient or unacceptable by the employer. We think it is better to have a diversified "portfolio" of liabilities rather than a single basis for which any change involves an agonizing reappraisal.

For an insurance company using the new money method, old liabilities may not enjoy significant benefit from current high yields on new investments. This is another argument in favor of applying a liberalized interest assumption prospectively only. I suspect that the same argument may be valid for a trust fund.

On the second part of this question, we are not aware of any case in which the Internal Revenue Service has requested that an increase in interest assumption be made under one of our contracts. Our practice makes it unlikely that such a case could arise.

If a change in assumptions results in a reduction in the unfunded past service liability, we furnish to the group a special 10% base. This base is the previous 10% base reduced by the amount of reduction in unfunded past service liability. The group may then contribute on the basis of the revised figures and use them in its tax return.

MR. JAMES H. BRADDOCK: I believe most consulting actuaries would be less conservative than the Equitable in valuing only future liabilities on an improved rate basis. I think the general practice is to revalue an entire plan at a rate such as 3.5% if a lower rate is in use and the fund is earning 4.5 or 5%.

We do know of cases where the Internal Revenue Service has requested an increase in the interest rate assumed for pension plan costs. The Revenue Service has maintained that under realistic interest assumptions some plans were overfunded and has wanted to disallow the tax deductibility of contributions.

I don't believe there are any IRS regulations about reduction in unfunded past service liability due to a change in interest rate. With investment yields on funds increasing, it certainly seems logical to make such reductions.

MR. DOUGLAS C. BORTON: With respect to subsection (i), our experience indicates that there has been a definite trend toward the use of higher interest rates in the valuation of trustee pension plans, particularly those established in the 1940's. It is important to keep in mind, however, that this one cost factor should not be considered independently of other valuation assumptions, such as rates of salary progression, turnover, mortality and retirement. For example, a plan which was set up on a 3 percent interest basis and actually is earning over 4 percent may be experiencing losses in some of these other areas.

In regard to subsection (ii), there have been many rumors that the Treasury Department is looking much more closely at the assumed interest rate, particularly if the actual investment yield is considerably above the assumed rate. One rumor is that the Department now feels that any valuation interest rate below $3\frac{1}{4}$ percent should be investigated. There was a case in Ohio which received some publicity. In this instance, the Treasury representative requested a change to at least a 4 percent assumption. As I recall, the trust never earned less than 6 percent, so that

4 percent seemed quite conservative as compared to the past earnings history of the trust fund.

With respect to subsection (iii), I believe that many different methods have been used. Sometimes the outstanding past service cost has been reduced or completely liquidated with the initial past service tax base adjusted or eliminated. In other cases, the outstanding past service cost has not been adjusted and the full effect of the change in interest rate has been reflected in the future service cost. If the past service cost originally was determined under the frozen initial liability method, I believe this latter method is consistent with the old Bulletin issued by the Treasury Department. I would think that the most important factor affecting the method of handling the outstanding past service cost would be the basis used to establish the past service cost originally. Other factors would be the amount of the increase in the assumed interest rate, whether the plan is being amended simultaneously with the change in interest rate, and the progress of the liabilities for past service since the plan was established. Some years ago, when Social Security benefits were increased, there was some question as to how this should be handled in plans with a direct Social Security offset. So far as I know, there was no definite suggestion from the Treasury Department and I imagine a number of methods were used.

MR. ROBERT A. WISHART: In regard to section B, let us keep in mind that we are talking about utilization of common stock appreciation only, and the fixed securities held in the trust are not affected by any of these procedures. Some persons with whom I have talked about this subject feel that if the equity portion of the portfolio has appreciated but the bond portfolio has depreciated, we should offset the depreciation before taking any position on writing up values. So long as bonds are not in default, it is assumed that the book value—that is, cost or amortized value—is satisfactory, and so it is usual to disregard the bond part of the portfolio.

The first question that might be asked is: "When do you start such a procedure?" It seems to me that it would be prudent to wait until an important margin such as, say, 25 percent actually exists. Additional past service cost arises when career earnings plans are updated. These costs might be funded by gradual realization of part of the appreciation. Also, if your plan is based on final average earnings, part or all of the earnings increase cost might be taken care of by a formula that gradually recognized part of the increase in value of the common stocks. Certain precautions should be taken. I should be inclined to leave a margin so that all write-ups would be stopped after the adjusted value gets to within 20

percent of the current market value. No write-up should be made beyond a point where the yield on the basis of the adjusted value falls below the yield used for actuarial purposes. For example, if the actuary assumed a $3\frac{1}{2}$ percent yield and the actual return on securities costing \$4,200,000 was 4 percent on the cost price, then if the adjusted cost were written up to more than \$4,800,000 the yield on the adjusted cost would be less than $3\frac{1}{2}$ percent.

The second question might be: "Should you write down values as well as write them up?" I admit frankly that I do not know the answer to this question. If you adopt a program that leaves a margin at both ends, this problem will be delayed a bit. At the present time, the theory regarding common stocks as a class is that over any extended period of time they will continue to increase. Using this theory, you would not write down the adjusted value but would consider all of your stock holdings as you do a bond that has temporarily depreciated in value but which will eventually recover.

Under any method of writing up securities, the common stocks should be considered as a whole, and securities should not be considered individually. If the process anticipated individual treatment of each stock held in the portfolio, this would entail a tremendous amount of detailed work and it is doubtful that any useful purpose would be served. The procedures or formulas so far developed call for a subsidiary account to be maintained, supplemental to the regular accounts of the trustee.

Without going into all of the details, let me describe briefly six methods that have been used to take advantage of increases in the value of common stock.

(1) Sell the stock and have an actual gain.

This, I suspect, has been done to a considerable extent. Realized gains present no problem. The Treasury Department is accustomed to them, and so far as I know has raised no question, even when unusual or large amounts of actual profits have been taken.

(2) Use market values, or an average of market values over some short period.

Traditionally, the use of market values for the purpose of determining the contributions of the company has been avoided. However, if the level method of contributing is used, fluctuations in the market will not have as violent an effect on the contributions as may be first thought. For example, if 50 percent of a pension fund portfolio were in common stock and the market value of these securities dropped 25 percent in a year, the increase in the contribution of the company would probably be less than 10 percent.

One of the difficulties of going to a market value approach is that at the time the method is adopted there would be a very large immediate write-up. If this system were considered, then it might be better to go to the full market or the average market value over a period of time.

(3) Long-Range Appreciation Rate Method.

Under this method the cost price of the securities is written up each year by 3 percent of the adjusted cost. (I know of some cases where 5 percent is used.) This is based on the theory that equities traditionally will increase in value at not less than 3 percent of themselves each year.

(4) Long-Range Yield Method.

This is a relatively new method being considered by one bank and the Treasury Department has given assurance that the plan will be approved. This method is based on the assumption that common stocks will produce a yield over a period of years of something like 7 percent from dividends and price appreciation.

So long as the market value of the equities exceeds the adjusted value, a write-up is made. The amount of the write-up is a fixed percentage of the adjusted value less actual dividends received. If stocks are sold during the year, any realized gains are used to reduce (and losses to increase) the adjusted value, but to a point not below the lower of the cost or market value. Such gains and losses do not affect the amount of the reduction in the employer's contribution for the following year.

The amounts written up under this method would tend to decrease as the return on stocks increases. The amount in the appreciation account would also fluctuate from year to year, depending upon the actual profits and losses realized.

(5) Use X percent of the difference between market and adjusted book values.

This method is the one outlined in Treasury Ruling 57-549. Here you might decide to take as a write-up X percent of the difference between the adjusted cost and the market value each year. I am not sure what the theory is behind this method, but if X were large the write-ups would have a tendency to decrease unless the value of the stocks increased more rapidly than X percent.

(6) Transfer a single trust to a pooled trust.

Most large banks now have pooled trusts for pension plans. When funds enter these pooled trusts, they must be entered at market value. A realized gain can occur by using this procedure, but this is a one-shot endeavor.

These six methods are the ones with which I am familiar. I imagine there are many more, or at least variations, of these methods.

MR. PRESTON C. BASSETT: We have run into problems with the Internal Revenue Service on the use of the interest rates which they have claimed have been too low for the valuation of pension plans. Some years ago it may have been a convenient, and some people might even say sound, actuarial practice to use an arbitrarily low interest rate and an obsolete mortality table. The Internal Revenue Service has wanted us to increase the interest rates to a more realistic basis, without changing the mortality table at the same time, particularly after they had brought the topic up. I think you are better advised if you bring the topic up first and change the interest rate and the mortality table at the same point of time.

There appear to be only isolated instances where it is to a company's advantage to write up the common stock portfolio. As a matter of fact, from our experience it is probably less than 5 percent of the cases. When we analyze the objectives and desires of our clients in regard to the funding of their pension plans we almost invariably find it is to their advantage not to write up the assets for "official" or "tax" purposes. However, this does not mean that for their internal decisions, and particularly their decisions regarding the level of contributions to the fund, market values or some intermediate values are not taken into account. Actually, for several of our clients we now do side calculations, taking into account not only a more realistic value of assets but also other actuarial assumptions, particularly salary scales, on a more realistic basis to determine current and long-range levels of contributions.

The question above only relates to formulas for the gradual write-up of securities. One should not forget that the use of wash sales or the one-shot write-up of assets is also valuable and we have used them on occasion. We have found that the way assets are written up and the type of formula are of considerable importance. Some formulas that we have seen recently would cause serious funding problems in situations which may not be unlikely in future years.

We believe that the formula for writing up securities, if any, should be geared to the type of benefits being provided under the pension plan. For example, under a career pay or \$1.00 per month type of benefit we believe that the logical way to handle unrealized appreciation in the fund is to have a one-shot write-up when the plan is amended to update the past service benefits. This helps soften the blow of accomplishing the desirable updating of past benefit credits. The forces which caused the appreciation in the common stocks may have been the same forces that caused the past service benefits to be inadequate. On the other hand, if the company has adopted a final pay type plan a gradual write-up which recognized some of the appreciation each year helps to offset the increase in cost as em-

ployees' earnings increase faster than the annual salary scale assumed.

The formulas which we have used can be broken down into two broad categories: (a) those that use a composite or aggregate write-up formula, and (b) those that write up or down on an individual security basis. The composite formulas generally base the write-up on the total book value of the common stock fund.

The composite formula that we have found most satisfactory, and have installed in a number of instances, is one under which the book value of common stock is written up by a fixed percentage each year, usually 3 percent. However, we do place certain limitations on the write-up. For example, we might state that the write-up would not be made if the adjusted book value (book value plus appreciation account) is over 90% of the market value of the common stocks held. Also, we provide for writing down the adjusted book value if it exceeds 110% of the market value. Adjustments are made for sales of securities during the year.

More recently, we have been installing formulas which write up or down the individual securities held in the common stock portfolio. The amount of the write-up or write-down is dependent upon the difference between the market value and the book value of each issue of stock. We feel that this individual type formula gives more control on the values used for the common stocks in the trust fund. It also gives accurate results on the sales of securities. We were concerned at first that this type of individual writing up or down would cause the trustees certain problems in supplying us with the necessary information. However, so far in actual practice we have found that this has not been a problem and that the trustees have been able to give us the information with very little additional effort.

MR. CLARK T. FOSTER: A local agent of the Internal Revenue Service demanded that the pension plan of one of the largest companies in the country be valued each year with an interest assumption equal to the yield actually realized during that year. This question was not resolved, apparently being forgotten by IRS amidst the settlement of many other tax questions.

We have had to increase the rate of assumed interest in two or three plans, but were able to adopt a more realistic mortality basis even though the agents may not have liked it.

A serious consequence which has arisen from IRS attitudes in Washington and elsewhere is a disallowance of contributions as tax deductible, in an amount equal to any surplus created by interest and other capital gains in the current year. Such disallowances appear to have become the general rule of the Internal Revenue Service even though the events causing the

surplus occurred after the determination of the contribution and knowledge of the events is gained after the end of the tax year.

Regarding the way to change the past service liability with an interest assumption change, we have not had this specific question. However, we think that we have to follow procedures we have had to use with other types of large gains. Here, we have had to subtract the gains from the past service base to create a new base, and forgo past service deductions until 10% of the new base times the number of years since the establishment of the original base exceeds the accumulative total of past service deductions.

MR. WILLIAM A. DREHER: If we were more realistic in our selection of all assumptions, I think we might have fewer problems when it appears to the Treasury that excessive deductions have been claimed.

Concerning section A, what would be the Treasury's position if (a) a pension plan were funded through a deposit administration contract issued by an insurance company using a new money method of crediting interest and (b) the client had recently changed from an individual policy plan and put a large amount of money into the deposit administration fund, in a year when the rates were extremely high?

Assuming that the actuary wanted to value all of the liabilities of the pension plan in toto and offset against them not just the amount of the deposit administration fund but the entire dividend fund of the insurance company, what would be the proper interest rate? Should one rely on the guaranteed rate applicable to the deposit administration fund, as Bob Link suggested, or should some higher rate, such as the 5%, 5½%, etc., that is being trumpeted currently, be used?

My third point is a footnote to Bob Wishart's comments on asset valuation. Two British actuaries, Heywood and Lander, recently gave a paper before the Institute in which they gave a description of an asset valuation method that was new to me. They suggest that the assets of a pension fund should be valued by discounting at the same rate that is used to discount the liability. A bond would be valued as the sum of the present values, using the actuarial valuation rate, of the future interest payments and the maturity value. Similarly, a common stock would be valued as the sum of the present values of assumed future dividend payments in perpetuity. This method would give anomalous results for common stocks in "growth" companies.

Kansas City Regional Meeting

MR. FREDERICK P. SLOAT: There has been a very definite trend toward increasing interest assumptions in the valuation of pension plans

which have been in operation for several years. This is particularly so in the plans that were set up with a $2\frac{1}{2}\%$ assumption, back at the time when this rate appeared to be rather liberal. Today we are not faced with the problem we had back in the 1930's when interest rates were going down and setting the interest assumption required extreme caution.

We have recently proposed in some cases the use of dual interest rates; I have not seen this used as yet, but it seems to me to make sense. One reason we hesitate to adopt an interest rate assumption which may appear to be entirely justifiable for, say, the next five or ten years is that we must use our rates in connection with long-term future projections. Therefore, maybe the thing to do is to use a dual interest assumption—a somewhat higher rate for the present with a lower conservative rate thereafter.

Increases in interest assumptions have been requested by some of the district offices of the Internal Revenue Service, while others have not yet made such requests. However, I think these requests have been made in the extreme cases such as where assumptions were continuing at $2\frac{1}{2}\%$.

MR. GEORGE V. STENNES: I certainly agree that there has been a tendency to increase interest assumptions. More specifically, however, we have encountered this trend in several situations where the motivating factors were quite different. One of these has to do with negotiated plans which were originally set up with a $2\frac{1}{2}\%$ or 3% interest assumption. In current negotiations the union will seek a more realistic assumption, likely proposing a 4% rate and settling for $3\frac{1}{2}\%$, for example, where the ultimate benefits are calculated on a previously negotiated cents per hour input.

The second area where we have found some reason to use more realistic interest assumptions is in plans which are being set up or modified to provide variable benefits. It seems unfair to employers to use a $2\frac{1}{2}\%$ or 3% assumption when the employees are going to benefit by all of the excess. It is my feeling that failure to employ a more realistic assumption provides too much of a built-in bias. The employer's cost should reflect a reasonable interest assumption.

A third area in which we have noticed some revision in interest assumptions is among plans which have a large market value appreciation which is not taken into account in the valuation. In some cases, although we haven't seen it with our clients, the interest assumption has been hiked to as high as 4% with the knowledge that the fund had this considerable unrealized appreciation.

Some of the life insurance companies using the new money approach seem to be stressing considerably higher interest, by illustrating the effects on costs should the new money rate, currently in excess of 5% in some

instances, continue. It seems to me, however, that quoting an ordinary life auxiliary fund plan with an interest assumption to the fund of 4% or 5% may be exceeding the limits of reasonable projection.

In our area, Minneapolis, we have not encountered requests by the Internal Revenue Service for increases in the interest assumptions. However, in talking with pension actuaries located in certain other areas we have learned that there have been such requests and in some instances the right to make these requests has been questioned.

It is our experience that regardless of how conservative the assumptions are, no question is raised as long as there is a substantial unfunded liability. However, in cases where the unfunded liability may be quite small and the employer has taken advantage of the allowance to pay normal cost plus interest on the unfunded liability, even though large gains would otherwise have reduced the limit below that amount, problems could be encountered. There is a provision in the regulations which allows an employer to contribute and to deduct the normal cost plus interest on the unfunded liability in this situation. That provision is worded to the effect that such allowance is permitted in these situations provided assumptions are brought into line with actual experience. We have not encountered this with our clients and are thus not aware of what this would actually require.

MR. SAM H. HUFFMAN: Changes have been made from an interest assumption of $2\frac{1}{2}\%$ to 3% or $3\frac{1}{2}\%$ and in a very few cases to 4% or $4\frac{1}{2}\%$ for one or more of the following reasons:

- a) A change is made to a more conservative mortality table and sometimes more conservative withdrawal rates and at such time it is deemed desirable to adopt a more realistic interest assumption to avoid unduly conservative cost estimates.
- b) Death and disability benefits are added to the plan or the benefit formula is liberalized, or both, and a more realistic interest assumption is adopted to avoid a substantial increase in the employer's contribution to the plan.
- c) A change in the interest assumption is made to avoid overfunding or to provide greater equity as to distribution of costs among present and future stockholders and allow more equitable distribution of benefits to present and future generations of participants.

Increases in the interest assumptions have not been made by request of the Internal Revenue Service, but I am aware of a few cases in another area of the United States where the change to a higher interest rate was made at the suggestion of the local pension reviewer of the Internal Revenue Service for some fairly mature cases with a long history of high yields on the trust funds. In this connection, it would seem that the consulting

actuary and the trustee should have as much leeway in the choice of the interest assumption (as well as other actuarial assumptions) as does the life insurance company in the determination of annuity rates.

A reduction in the unfunded past service liability, resulting from an increase in interest assumption, may be handled under the current IRS regulations as follows:

Under the entry age normal cost method of valuation the new and reduced gross actuarial deficiency or past service liability based on the higher interest assumption less the assets as of the valuation date is increased by the amount of payments made in the past on the actuarial deficiency or past service liability (exclusive of interest on the actuarial deficiency and normal costs) to give a new adjusted actuarial deficiency to form the base for determining the maximum contribution to the plan. As an example, assume that the net actuarial deficiency on the new valuation date at the new valuation rate of interest of $4\frac{1}{2}\%$ is \$1,000,000 and that 10% of the original actuarial deficiency of \$2,000,000 had been paid for one year in the amount of \$200,000 under the previous interest assumption of 3%. Since 3% of the original actuarial deficiency represented interest and 7% represented the amount actually paid on the actuarial deficiency, one payment of \$140,000 had been paid on the original actuarial deficiency and this amount is added to the new net actuarial deficiency of \$1,000,000 to form an adjusted actuarial deficiency or new base of \$1,140,000. This procedure is continued in future years until the net actuarial deficiency has been funded. Under a slight variation of this method, the new and reduced gross actuarial deficiency based on the higher interest assumption less the assets as of the valuation date is discounted at the new interest assumption to the initial valuation date of the plan and the previous payments on the actuarial deficiency are discounted at interest to the initial valuation date and the sum of these two discounted items gives an adjusted initial actuarial deficiency to form the base for determining the maximum contribution to the plan.

MR. SLOAT: The question appears to preclude consideration of a one-shot write-up of assets concerning which there seems to be disagreement among actuaries as to what position the Treasury will take. At least one prominent actuary has stated that it has been approved and yet another has found the Treasury seriously questioning the practice. The problem is further complicated by a Treasury requirement that once a change is made it must be followed consistently. It gives the impression that once you have elected to value on other than cost or book you must continue to follow the same procedure in the future. I wonder whether this single opportunity to make a change will actually stand up as time goes by.

With respect to gradual utilization methods, Revenue Ruling 57-549 sets up a basis for writing up assets gradually by a percentage of the difference between market values and book values.

Another method being recommended by at least one bank is to assume that the fund, through a combination of dividends, interest, realized and unrealized gains, is going to produce a constant rate, on the average, of $y\%$. Each year the difference between $y\%$ and that amount produced through dividends, interest, and realized gains is obtained through a write-up of the book value. This method, I think, has considerable appeal in that the results are the same whether most of the trust's stocks are growth stocks with relatively low dividend rate or whether the balance is in favor of high dividend producing stocks.

A third method is writing up each year by a uniform percentage of the cost values.

Another method which has worked out quite satisfactorily is to base assets on market values where level funding is employed. This method spreads the cost effects of appreciation experienced. For example, should appreciation of $x\%$ be experienced in a given year, about 7% of this amount would become a specific gain in that year and the remainder would be spread over future years.

MR. DONALD B. WARREN: We have found that the trust companies in the St. Louis area object to changing the book value of the stocks, because of accounting problems. Have you found a similar position in the Eastern trust companies? Secondly, in that method under which a level percentage of combined dividend and appreciation is used, what happens should you reach a point where the market values are not great enough to cover this write-up?

MR. SLOAT: As to the first, I know of at least two Eastern banks recommending one or the other method, and am not aware of any cases where the banks have objected to it.

As to the second, I think the market values provide a test. If the values are not sufficient to make the write-up, then you do not do it. I haven't used this specific method because there are other factors in the level funding approach which can be employed to accomplish the same result.

MR. STENNES: If you have a large appreciation and an unfunded liability, there are situations where it is prudent to stop paying off the unfunded liability.

I know, for example, a large utility company must justify its rates. I do not see the justification for paying off past service when the appreciation may well equal the unfunded liability. In other instances this would

not be applicable. I think what should be done depends on the particular type of organization, and until this whole problem becomes more settled, that is the position I would rather take.

As to the trustee's accounting problems tending to discourage write-ups, I think this matter should be within the realm of the actuary. It should not be necessary for the trustee to do any more accounting, unless he and the employer want it that way.

MR. HUFFMAN: In the trustee plans with which I have had experience, it has not appeared to be important to be concerned with a gradual utilization of unrealized capital gains by formula, since corresponding results could be obtained by other methods which avoided any additional accounting problems such as changes in the interest assumptions and gradual sale of securities to adjust from a cost to a current market (new cost) basis. Also, under many of the new pooled pension and profit-sharing funds maintained by the trust departments of the larger banks, the cost value of securities may be adjusted to a market value basis (either gradually by formula or otherwise) as of the end of any month or quarter by simply selling the desired number of shares in the stock (equity) fund or bond (fixed income) fund and then buying back the same number of shares to be valued at the new cost basis, thus allowing unlimited flexibility with respect to utilization of capital gains without the payment of brokerage fees.

MR. SLOAT: In a few cases we have made an adjustment to the unfunded past service liability under the frozen initial liability method. This was done to keep the normal cost from reducing drastically. We haven't asked for specific rulings but have found nothing to indicate that this procedure would be rejected.

MR. STENNES: This procedure would be contradictory to the frozen initial liability method under which gains are specifically spread into the normal cost. Now, presumably you could encounter a ridiculous situation where the normal cost was zero and there still was an unfunded liability. Is there any more merit in making the adjustment in the unfunded liability than to go ahead and make payments for past service only? There is also one word of caution. In attempting to make such adjustments you may start to narrow the range of deductible contribution on the part of the employer.

MR. RAY M. ELY reviewed part of the discussion of Mr. Preston C. Bassett given at the Philadelphia regional meeting.

MR. HUFFMAN: Under the frozen initial liability method it would seem reasonable or logical to apply realized capital gains (or unrealized capital gains on a gradual basis or otherwise) toward the unfunded past service liability where substantial gains are involved. However, this would be a modification of the true frozen initial liability method, but since it would normally result in a lower contribution and higher tax revenue it would seem that the Internal Revenue Service might not have any objection. Also, in view of the minimum funding requirements of the Internal Revenue Service for an approved plan, it is probable that capital losses could not be used to increase the unfunded past service liability but would have to be applied to increase the level of the normal cost. I am not aware of the approval of this method by the Internal Revenue Service but see no reason why it should not be permitted, especially in situations with large capital gains.

MR. DAVID R. KASS: It has been suggested that life companies have abandoned their traditional conservatism by using interest rates in the neighborhood of 5.75% in connection with insured pension plans. Mr. Sloat's earlier remarks concerning the use of high interest assumptions for annuity valuations during the short-term future, followed by lower interest rates for the long-term future, provide a key to understanding the propriety of this approach; interest rates such as 5.75% may very well represent a proper assessment of the very short term, if we are speaking of a net rate anticipated on a generation-year approach.

However, I would question the use of rates of this magnitude for another reason, namely the impact of federal income tax. While it was the intent of Congress, in framing the Income Tax Act of 1959, to extend tax relief to qualified pension plans, it is improper to assume that all investment earnings arising from such plans are completely tax-exempt. Specifically, tax relief has been provided by means of a "pension reserve deduction" equal to the product of (a) qualified pension reserves and (b) an interest rate which is, in essence, equal to the average portfolio yield before taxes. The exact nature of this deduction from taxable investment income is described in Mr. Fraser's excellent paper on the new tax law presented yesterday.

It would, therefore, seem obvious that any interest allocated to a group annuity case which exceeds the portfolio rate must reflect the impact of federal income tax. Ordinarily, the corporate tax rate of 52% applies to an insurance company's taxable investment income. If this rate were applied to the excess of (a) generation interest rate of 5.75% over (b) a portfolio rate of, say, 4.35%, a federal income tax offset of almost $\frac{3}{4}$ of 1% would be required.

Part 4 of Mr. Fraser's paper contains an example of this sort of situation. By modifying his Example 1 to assume that all new pension funds were invested in fully taxable securities, the tax arising from this investment would equal roughly 40% of the excess of the generation interest rate over the portfolio rate.

In any event, these tax offsets of up to $\frac{1}{2}\%$ to $\frac{3}{4}\%$ must be taken into account if we are to speak of realistic yields on a generation interest basis. If, in allocating interest on a generation basis, we assume that all the investment income attributable to group annuities may be credited to the group annuities, then we must necessarily assess these tax offsets to other lines of business.

MR. DANIEL F. MCGINN: In the experience rating or dividend formula, if you use the excess gain to set up a vested contingency reserve, I think you are allowed a deduction on that reserve just as though it were any other kind of legal reserve, and that you do then have relief on the matter of federal income tax.

MR. ROBERT C. McQUEEN: Assume that a company writes only group annuities, has an over-all portfolio rate of 4% and then attracts and invests new money at $5\frac{1}{2}\%$. The portfolio rate is increased by exactly that amount of excess dollars earned on the new money. Under Phase 1 of the income tax the earnings would receive relief, and it is my impression that attracting new money which is invested at the new money rate does not therefore decrease its effect.

MR. DAVID G. SCOTT: When you consider the over-all tax effect on the company which has nothing but group annuity business and surplus, you do find that the new money does increase the tax. Assume the company has its old investments at 4%, and that the new money is invested at $5\frac{1}{2}\%$. The investment income from the new money when spread over the entire portfolio increases the interest rate earned by the company's portfolio from what it otherwise would have been. Thus there has been an increase in the interest rate earned by the company's surplus. Therefore, the tax is undoubtedly going to increase. By attracting new money, then, which is invested at a higher rate the tax is also increased and consequently the company is in no position to return all of the excess interest in the form of credits on the annuities.