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DESIGN AND MECHANICS OF PENSION PLANS

Adjustment of Pension Benefits for Inflation

A. What are the advantages and disadvantages of the various methods of adjusting pension benefits for inflation, including:
   1. The final-average plan, with nonautomatic after retirement adjustment?
   2. The equity annuity?
   3. The cost-of-living annuity or approximations thereto?

B. What are the design or mechanics features of such methods? What are the underlying principles and considerations in benefit design? To what extent is each being used?

MR. JAMES L. CLARE: When prices go up, pension benefits need to be increased. It is as simple as that if we are to have the retirement security stressed by Mr. Fitzhugh.[1]

Options

Perhaps an employer's pensions do not increase in retirement. (Less than 1 per cent do.) Although by no means every employer provides widows' pensions, many do permit a joint and last survivor option. Or there may be other options—such as the "notched" option or "rearranging the pension income"—all at virtually no cost to the employer.

Why not, then, have a "cost-of-living" option, at no cost to the employer, starting the pension at a lower initial level and then increasing it throughout retirement at a fixed percentage rate of increase? One or two life insurance companies are doing this for a handful of people, but why do not all offer this?

Costs

The cost-of-living option pays for itself by reducing the initial amount of the pension. Conversely, if you leave the initial pension benefits unchanged and simply increase them during retirement to offset inflation, then it will cost more money. How can employers pay for pension increases during retirement, while leaving pensions at their present starting levels?

1. *Investment profitability.*—By all means first maximize the profitability of the pension investments. Investment freedom is the key. Some say that equity unit annuities maximize group pension investment profitability. I disagree.[2]

[1] Gilbert W. Fitzhugh, *TSA*, XVIII, 117–24, especially 118 and 121.

[2] James L. Clare, *Canadian Institute of Actuaries Reports*, November, 1966, pp. 28–29.

The whole point of CREF (College Retirement Equities Fund) was the need for investment freedom *before* retirement, where CREF contributions and assets are necessarily allocated from individual to individual (and not on a group basis). Then, to avoid abrupt liquidation of common stocks at the single point of time at which an individual retired, the equity investing was continued after retirement. In individual pensions, therefore, the equity unit annuity is not so much the objective; it is rather the by-product (and the accidental by-product, I suggest) of common stock investment before retirement.

Equity unit annuities, despite all their glamor and notoriety and despite their considerable individual pension-funding merits, constitute a very small fragment of group pensions—probably less than 1 per cent of United States and Canadian group pensions. However, there is always a possibility that equity unit annuities will mushroom, and the rest of us will have to go along with the fad unless some facts are more widely understood.

In a group pension plan, equity unit annuities add nothing except (1) complexity; (2) a preoccupation with common stocks (where other investments could be even more profitable, whether now or at some future date); (3) unnecessary constraints on the timing of deposits (which matter not at all to TIAA-CREF but which certainly do to a steel company, say); and (4) inferior benefit design.

I recall one brand new building at the University of Manitoba. The temperature was 90 degrees one day and 50 degrees the next. As Professor Vogt observed, "On the average, it was 70 degrees. It was quite comfortable—on the average." An equity unit annuity pension is like that. It goes up and down. The trouble for the pensioner is that it can (and does) go down, even while the cost of living goes up. Equity unit annuities are not needed in any way, shape, or form in a group pension plan. Group pension plans without equity unit annuities but with regular unit benefits can already get the best of both worlds and enjoy maximum investment profitability (both before and after retirement) and then, as a separate design problem, superior benefit planning (i.e., the best possible distribution of the results of the investments).

In any event, even a regular unit benefit plan, with maximum investment flexibility, will not necessarily blindly finance adequate cost-of-living pensions. Investments are important, but they are not the whole story. Simply suggesting that a change in investment program will thereby automatically make everything come up roses is surrendering to a snare and a delusion. Sometimes it will be enough, but more often it will not.

2. *Employer costs.*—Employer costs require limits. Some ignore this; they urge that an employer provide retirement security, with both adequate initial retirement-income levels and cost-of-living increases, regardless of the cost. I disagree. The solution is not simply for the employer to make his pension contributions larger and larger and larger—without limit. Employers spending too much on pensions will lose valuable employees, because they will not have enough money left over for other essentials. Pensions are only one among many spending priorities. Employer pension costs must be reasonable at all times, even in the long-term distant future.

3. *Adequacy.*—Retirement security implies adequate pensions when employees first retire. Legislation in our two countries, passed or pending, calls for funding, vesting, reinsurance, and so on. Add the need for pensions increasing in retirement to protect purchasing power, and you can readily have more cost than is reasonable for the employer, even with top-notch investment performance.

Ages of Retirement

The answer to this dilemma I first gave with respect to private group pension plans in 1958.[3] (A year later I suggested a similar solution for state pension arrangements.)[4] I suggest that the ages of retirement be reconsidered.

Actuaries and pension-planners seldom consider what ages of normal retirement can be afforded in keeping a sound actuarial balance between adequate pensions and reasonable costs. There are exceptions[5] but very few. Yet age 65 has no magic behind it.[6] In most group pension plans, there are no "facts" and no "demonstrations" providing actuarial justification for age 65 as "the" normal retirement age. It is my considered opinion that, in most employments in our two countries, most employees can work substantially beyond age 65, with continued profit to their employers. Reconsidering the ages of normal retirement opens a door through the cost barrier often surrounding cost-of-living pensions.

Final-Pay Pensions with Nonautomatic Adjustments after Retirement

The cost of these is commonly regarded as being high. Employers often find it more than enough paying for their blank-check, final-pay pensions

[3] Clare, *TSA*, X, 754–55. [4] *Ibid.*, XI, 872–74.

[5] Mark H. Ingraham, *Faculty Retirement Systems in Canadian Universities*, especially pp. 17–19; Clare, "What Is an Adequate Pension?" *Proceedings of the Eleventh Annual Conference, Institute of Public Administration of Canada*, 1959, pp. 118–25.

[6] Clare, "Retirement at 65 Is Obsolete" (delivered in the C.B.C. University Talks Series, recorded June 23, 1960).

for active employees. Few employers are willing to pay for increases after retirement on top of their present costs. I did not trace a single employer who fully advance-funded such increases or one who published any intention of so doing.

Such few nonautomatic increases as do occur mostly happen in the better-established firms, with a sizable number of pensioners. While final-pay plans have grown in relative importance, and may be expected to grow further in the next ten years (probably keeping well ahead of equity unit annuities), nevertheless, there is no trend toward adding regular postretirement increases, either automatically or nonautomatically.

Flat-Benefit Plans

The benefit levels of flat-benefit plans have often gone up at a faster rate than the cost of living. Thus, such plans have effectively passed on productivity gains to employees and to pensioners, over and above inflation offsets, and often more.

However, benefit levels in the 1950's were not necessarily adequate for retirement security. It would have been possible, with the contributions of the 1950's, to have adequate pensions, cost-of-living increases in retirement, and full funding (even at Studebaker). In other words, there could have been real retirement security—if only retirement ages had been set where they could have been "afforded."

Flat-benefit plans, as presently set up, will only provide benefits increasing in retirement at present rates *if* the employer stays in business. The increases in retirement are not advance-funded.

Cost-of-Living Increases in Retirement

"Purchasing power pensions" can be added to any group pension plan with unit benefits, including final-pay, flat-benefit, and career-average (with or without preretirement increases).

Purchasing-power pensions may increase costs by about 15–25 per cent in total (employer costs plus employee costs, if any). (Consult your actuary for a specific estimate for your own plan.) But, then, while keeping pensions adequate at all times, costs may be held at reasonable levels by setting the ages of normal retirement where they can be afforded on an actuarially sound long-term basis. This has actually been done[7] and makes for superior benefit planning. It can also make for enhanced employer profits. Seldom do actuaries advise as to the "most profitable ages of requirement." If they do not, perhaps others will—personnel officers, government planners, social workers, accountants.

[7] Clare, "The Case for Cost-of-Living Pensions," *Canadian Business Magazine*, April, 1967, pp. 76–80.

Cost Safeguards

Actuarial funding methods have considered and mastered fluctuations in investment yields, expenses, mortality, disability incidence and duration, widows' pension parameters, entry ages, termination rates, employment levels, and earnings scales. Such well-established actuarial approaches have been extended by Mr. Calvert to rates of inflation.[8]

But, even with a plan drawn up as I suggest, with the actuarial expectation of controlled and reasonable costs, there still need to be safeguards in case inflation runs away. Often, I suggest, the real limitation for the employer is to build a permanent ceiling on his *rate* of contributions (money-purchase style, although incorporated into a regular unit benefit plan). This has been done and "registered" with a Canadian province, both for a cost-of-living plan and for more than one final-pay plan.

Fighting Inflation

Retired employees are helpless and cannot fight back at inflation. If they have level, fixed-dollar incomes, their purchasing power goes down. The resultant shift of economic power away from retired people must, to some extent, soften the hardships of inflation for active employees. To that extent, failure to have pensions increasing to offset inflation feeds the fires of inflation.

On the other hand, consider purchasing-power pensions, with the ages of retirement set where they can be afforded. Then, if inflation gets worse, the ages of retirement must be raised further, thus lengthening the working lifetimes of active employees. This translates the facts of inflation into a penetrating message. Cost-of-living pensions, as outlined, are therefore strongly anti-inflationary.

The Future

My sample of replies (small and random) suggests that in 1976 there will be more cost-of-living pension plans, but they will still be a small minority. That may be so, but the picture then could be very different if only the facts of the problem can be presented fairly and plainly to the public. As I have seen at firsthand, once the public knows that it can have the real retirement security of purchasing-power pensions such pensions will sell themselves.

The Aetna and the New England Life are both making cost-of-living pensions more "respectable" and more familiar. No longer will the one-sided story of high-cost generalizations hold the stage all alone. Who knows? Just as open steam motorcars got gas engines and roofs and

[8] G. N. Calvert, *TSA*, X, 99–102.

windows in due course, perhaps ten years from now the great majority of pension plans will be on a cost-of-living basis and the equity unit annuity will have vanished from the group scene.

MR. CHARLES B. BAUGHMAN: Compared with the other plans, the benefits of the variable annuity are generally quite adequate. Costs are low and, except when the market is in a serious depression, the variable annuities will show that benefits are higher than they would have been under the cost-of-living annuity. Moreover, once the variable annuity plan has been funded, there are no additional costs required for periodic increase of the benefits.

A study which we made showed that the worst possible time since 1880 to retire with a variable annuity was in 1932, but, even then, the individual was not badly off, since the payments increased as the stock market recovered. Our study also showed that for that particular time the average rate of return, instead of being negative, was 3.1 per cent. This was the worst possible contract (twelve-year, premium-paying contract) at the worst possible time in history for a retirement to occur.

MR. KENNETH ALTMAN: This year the New York State Employees' Retirement System added a cost-of-living benefit program to the existing five-year, final-average salary plan. We have a relatively young retirement age for the bulk of our membership, age 55, and in the case of uniformed personnel, twenty- or twenty-five-year half-pay plans. The low-retirement-age factor can make a cost-of-living program quite expensive. In an effort to control these costs, we have imposed an age-62 minimum below which cost-of-living benefits will not be provided.

We do not believe that the Consumer Price Index which relates generally to an urban family of average income with several children is at all appropriate for retirees. Currently, the retiree under Medicare does not begin to have the same medical responsibilities that he did several years ago. Moreover, through local programs many senior citizens are able to obtain goods and services at lower cost than active working employees. We plan to urge the Bureau of Labor Statistics in Washington to develop a new index which would be more appropriate for retirees.

Major Plan Revisions or Plan Terminations

What are the problems of design or mechanics associated with major plan modifications, including:

a) Change of contributory plans to noncontributory?
b) Change of money-purchase plans to fixed-benefit plans?
c) Changes associated with reorganizations of business enterprise?
d) Changes associated with complete or partial plan termination?
e) Changes of funding mechanism?

MR. JOHN H. FLITTIE: The reasons for major changes in a pension plan usually include one or more of the following: inflation, competition for employees, the tax structure, increased ability to pay, and the desire to co-ordinate and to simplify existing programs.

Changes of an existing contributory plan to noncontributory are increasing and involve the problem of whether to make the plan noncontributory for future service only or whether also to refund contributions previously made by the employees. A refund of prior contributions places generations of participants on the same basis but destroys savings and may present mechanical difficulties under some methods of allocated funding. There is also the question whether prior-service benefits should be reduced by the amount provided by the employee contributions refunded. This reduction is generally undesirable.

In the case of sale or merger of companies one problem of the actuary is to communicate to the laymen the various consequences of plan termination, including the tax and funding aspects, which may not otherwise be apparent. Laymen also do not take into account the differences in actuarial valuations and future cost implications. For instance, a seller agreed to assume responsibility for past-service costs for service prior to the date of sale but failed to realize that the plan had a final-pay formula, no definition of accrued benefits, and no method of determining costs of the past service.

Generally, service with the seller is considered as service with the buyer for the purpose of eligibility and participation in the merged plan. The buyer, while not assuming responsibility for the adequacy of the seller's accrued benefits, will see that such benefits are preserved and that there are no tax consequences to participants.

Plan terminations and suspension of employer contributions are governed by the IRS rules and the provisions of the plan itself. The actuary, however, must determine the amount of restricted benefits and the allocation of assets, recommend the method of winding up the plan, and advise the employer of the possible applicability of P.S. 57 of the IRS regulations.

When a change in funding instrument occurs, the mechanical problems involved are greatest if the change is from allocated funding, such as individual policies or a unit purchase group annuity to unallocated funding, such as deposit administration or a trust fund. The major decision in this situation is whether to maintain accumulated funds under the new allocated-funding instrument or whether to transfer funds from the old to the new instrument. Generally a transfer results in simplified administration and lower over-all expense charges; however, it must be accomplished so that no employee loses any accrued rights. Also it may be necessary to negotiate a transfer with the insurer where the old contract does not provide for transfer of funds out of the contract.

MR. DORRANCE C. BRONSON: I was very interested in Mr. Flittie's remarks. I do not intend to make a long supplement, but a couple of points did strike me as worthy of further emphasis. Quite a number of years ago I wrote a paper—not for the Society or an actuarial journal but for the employee benefit plan people—on corporate transfers in which many of these points were developed. In it, I emphasized and re-emphasized the necessity for not destroying any employee rights or accrued interests and for not interrupting, upsetting, or altering provisions for the termination of the plan which members had expected would obtain, many such members already being within the applicable area.

Mr. Flittie did mention at one point, I believe, something about protecting equity, but I would like to emphasize again protecting against any changes from expected plan provisions or transfer of plans between employers by mergers, and so forth, which fail to maintain such protection.

To illustrate, a few years ago a company was being acquired and the documents amending its plan were drawn so as merely to merge together, without refinement, new and old funds. It obviously would result in a dilution of the employees' fund interests for the firm being acquired. We interposed objections orally, but the objectionable wording was left. The company subject to being merged failed to attach as much importance to it as we did. However—and this was the interesting thing to me—when it came before the corporate trustee in New York City, the sense of stewardship they had for the plan enabled them to spot this readily. A vigorous objection was consequently made to the acquiring company, the trustee saying, in effect, "We cannot approve this unless you will include a provision that the employees being brought over will be assured of at least as much in equities as existed in dollars at the time of this switchover." So the acquiring company had to go along with the trustee, even though it had not gone along with our comparable proposal.

That is the gist of my point here—to write into, or supplement, the speaker's interesting rundown by suggesting that emphasis be put in the record that the parties carry out good and sufficient equity among the employees involved when things happen. It is highly unjust merely to juggle balls (plans) around in the air and let them land without regard to where a person's interests end up.

MR. GEORGE BRUMMER: Very often firms are changing profit-sharing plans to pension plans and sometimes are even creating a new profit-sharing plan on top of the pension plan. I have found these changes to be even more complicated than changing contributory to noncontributory, because of the necessity of preserving the vested benefits or perhaps all of the benefits that an employee has accrued in the profit-sharing plan.

Death benefits in a pension plan present several problems, one of which is that death benefits within a pension plan are taxed differently from those in group insurance. Besides the problem of running into maximum limits of group insurance permitted by law, we have to see who is insurable and to find out whether the individual policies may have more advantageous features than are obtainable today. Another factor is the nearness to retirement of the individual employee.

MR. CHARLES B. H. WATSON: The extreme complexity involved in combining two pension plans is shown in what may be the worst of all possible cases, namely, one in which the acquired corporation has a more liberal pension plan than that of the acquiring corporation. Solutions to this can range all the way from establishing a past-service benefit equal to the accrued benefit under the old plan and providing future benefits on the acquiring corporation's formula to using the acquiring corporation's formula for all years of service but providing a minimum equal to the accrued benefit under the old plan. In the worst example that I know of it was decided to let employees of the acquired corporation choose which plan they wished to retire under, even though the plans had different normal retirement ages and different eligibility requirements for all benefits.

Another problem can arise from the different funding positions of the two plans. In one case, the plan of the acquired corporation was funded at a much higher level than that of the acquiring corporation. In this case, the trust funds were merged, but a separate fund was set up to hold the assets from the trust fund of the acquired corporation so as to protect benefit rights for its employees. Benefits to employees of the acquired corporation were to be paid from this separate fund until it was exhausted.

Development of Group Pension Contracts

What has been the recent development in design of group pension contracts issued by life companies, with particular reference to:

a) Separate accounts?
b) Investment-year interest and the related cash-out questions?
c) Deposit administration guarantees?
d) Direct-rated contracts—IPG and its modifications?
e) Single-premium annuities for special nonpar situations?

MR. MALCOLM D. MacKINNON: A separate account is a segregated group of assets held for the benefit of a contract or group of contracts under which contractual liabilities vary with the investment results of the account. All separate accounts have been formed since 1961 and have been facilitated by state legislation, rule 3c-3 of the Securities and Exchange Commission, and removal of the capital gains tax from separate accounts held for qualified plans. A survey of 18 companies at the end of 1966 shows that 548 contractholders were participating in separate accounts.

Detailed asset-valuation procedures must be established. Also fitting separate accounts into life insurance accounting creates problems. For example, should a separate account be charged with insurance expenses and generate divisible surplus or should insurance-type gains and losses be reflected only in the general account? When an insurance company assumes an obligation to credit units in a separate account on a particular date, the funds must be transferred promptly. Otherwise the insurance company must absorb any investment loss or gain. Sometimes the insurance company may be asked to assume discretion and responsibility for moving funds between equities and the general account.

Under the investment-year interest method, interest credited for dividend purposes depends on the interest rates obtainable when the money is first made available for investment and on the subsequent reinvestment history of the money. The investment-year method follows the rules of algebra. If an amount is withdrawn when interest rates are unusually high, future interest credits will be depressed by the transaction, whereas, if interest rates are unusually low, future interest rates will be inflated. Withdrawals of large amounts of money can create very unusual interest rates (perhaps negative) which are difficult to explain. An effective solution is to treat relatively small withdrawals through the normal operation of the investment-year method and to treat large withdrawals by making a one-time charge or credit equal to the difference between the book and market value of the amount withdrawn.

Under deposit administration contracts there has been a steady increase in recent years in the interest rate which must be guaranteed if a company is to compete effectively. The most serious actuarial problem is the determination of a competitive rate which may be safely offered on unallocated funds received up to five years into the future. This is compounded by the use of investment-year methods for dividend determination. It is difficult to assume today what the new money rate will be five years hence.

There is an increasing trend toward the use of direct-rated contracts, usually including separate-account features. These contracts are known as "immediate participation guarantee" (called IPG). Some contractholders wish to use an insurance company's investment and administrative services, without using its risk-taking services. Thus contracts have been developed under which annuities may be canceled at the contractholder's request or under which annuities are purchased at the contractholder's option. It is important that the annuity purchase rates be appropriate in the light of investment conditions at the time direct rating ceases.

Single-premium annuities are used for special nonpar situations, in the case of termination of a trusteed plan and in the case of purchases of annuities at the time of distribution under a profit-sharing plan. Very high interest rates are used, and mortality assumptions are much less conservative for these types of purchases. However, somewhat more conservative mortality assumptions are used for profit-sharing distributions, since the employee can usually elect whether to take a lump sum or an annuity.

MR. ROBERT F. LINK: There are three possible ways of treating the invested funds in applying the investment-year interest method. The magic words are *prospective*, *retrospective*, and *retroactive*. My company chose the prospective method, whereby funds which had accumulated before the date of adoption of the investment-year method were maintained as one block. Some companies used the retrospective method, which means that they subdivide prior funds but only for purposes of determining investment-income credits after adoption of the method. So far as I know, no company has used the retroactive method, which would call for redetermination of interest credits already accrued before the adoption of the method.

Malcolm also referred to the problems of large withdrawals that complicate the operation of the investment-year method by producing negative generation amounts. My company uses the declining-index form of

the investment-year method, under which generation amounts are reduced from year to year by transfers to the current generation to reflect repayment of the related investments. One desirable effect of this approach is that an experience fund can be reduced by the amount of these transfers and a negative current-generation amount is not obtained. We do not see negatives until there is a really large withdrawal. Where a negative does appear, we generally determine the capitalized investment effect on the assumption that it is charged proportionately to all prior-generation amounts.

MR. D'ALTON S. RUDD: With regard to the problem of large withdrawals and their effect on the interest rate, we set up our segregated-fund system and do not issue fixed-dollar deposit administration contracts. Anyone who wishes a deposit administration contract on a fixed-income basis uses our fixed-income segregated funds. It bears a good interest rate and the funds may be shifted through withdrawals, each of which bears the unit value at the time of withdrawal. On our regular group annuities, which are nonpar with select interest rates, we have used current net rates for some cashouts.

MR. DORRANCE C. BRONSON: I merely wish to underline one point. I brought it up when Ed Green wrote his paper some years ago, and I have never been happy with the answers. One can look back through the literature of group cases and find any number of times when the prospective employer was assured that one of the great benefits of the insurance method was that you received the advantage of an average rate of interest over the years and the stability thereof.

CHAIRMAN CHARLES L. TROWBRIDGE: One problem involved in all this is where an insurance company, particularly a mutual insurance company, should draw the line between par and nonpar contracts. Nonpar contracts are against the general philosophy of mutual life insurance, and a mutual insurance company does not go into nonpar contracts if it can avoid them. On the other hand, under certain market situations in which the nonpar contract is the only one that will serve the needs, there is a slightly different philosophical situation and what are essentially nonpar contracts are issued.

Design Problems of Negotiated Plans

A. What special design problems are encountered in negotiated plans of the single-employer type? What is the long-range solution to the problems arising if initially both benefits and contributions are fixed?

B. What additional design problems arise in a negotiated plan of the multiple-employer type? How can questions of equitable treatment among groups be resolved?

DR. J. PERHAM STANLEY: Between a negotiated pension plan and any other kind there is really no difference, except that more care must be exercised in the drafting of a negotiated plan because an additional party, the union, is looking over your shoulder. For example, in a negotiated plan if a number of people transfer out of the union group into supervisory positions and if there is no provision for transfer of assets or for paid-up benefit credits, large actuarial gains will be built up which the union will tend to insist on using for higher benefits that may never have been originally contemplated.

It is also necessary to cover in great detail what will happen in the event of a partial shutdown of operations. For example, if the plan provides for vested rights and if one of several plants shuts down, a carelessly drawn plan may in effect shift the burden of paying for those vested rights on the still-active operations.

Although negotiated plans are often written to provide for a fixed company contribution, such as a contribution of $0.10 per hour per employee, this type of funding is not the most common type of commitment in programs covering a single employer. In such programs the most common funding language is a commitment that the employer will fund the plan "on a sound actuarial basis." I think that such language can easily be interpreted in the union's favor and to the disadvantage of the employer, and I do not recommend it, although it is commonly found. On the other hand, language specifying that the employer will fund the current-service cost of the benefits being provided and will amortize the past-service cost on a level basis over a period not to exceed a stated number of years can usually be written in such a way as to definitely limit an employer's funding obligation.

When large increases in the benefits are granted and such increases are granted to existing pensioners, and if the termination provisions give existing pensioners a first priority on the funds, a plan which is fully funded as of yesterday may suddenly be in such a condition that employees aged 50–60 may find themselves completely unfunded. For this reason I feel that there is a very clear need for examination of these plan provisions from an equity standpoint.

Multi-employer plans have exactly the same problems plus a few areas where more attention must be given than in the single-employer plan. Multi-employer plans are divided into craft and area plans. Craft unions include plumbers, bricklayers, carpenters, and so on, where there are usually a large number of very small employers bargaining on an association basis. In many cases the employers are bargaining on a cents-per-hour basis and as a practical matter have little to say about the design of the plan.

The parties to the plan, union and employers, usually spell out both benefits and contributions, but, as a practical matter, they usually take the position that the agreement is only going to run for five years at most and, if contributions and benefits get out of line, the whole thing will be modified at the expiry of the contract. I think that the employers have some duty to keep things on a sound basis, but often the actuary is the only one around who is in a position to do this.

The second type of negotiated plan, the area plan, is not characterized by a single industry but by a program covering a diversified group of employers drawn usually from a limited geographical area (although sometimes that area can be very large). Customarily such a plan will start out with uniform benefit and contribution levels for each employer. Then the union finds that it can negotiate $0.20 a hour from Company B whereas Company A contracted for only $0.10 an hour. In this case Company B would want to have a higher benefit level. Eventually a situation can be reached where the plan, while initially established with both fixed benefits and fixed contributions, eventually provides for a wide variety of benefit and contribution levels among the various employers.

Another problem peculiar to area plans is making sure that the plan is not set up in such a way that it attracts only high-cost long-service companies who are on the brink of going out of business and fails to attract the recently established company. Similarly, if an employer drops out, we do not want that employer to drain the funds supporting the benefits of the employees of the remaining employers.

Establishing past-service credits in multi-employer plans presents a unique problem, because small employers frequently have inadequate records or none at all, particularly where there are frequent transfers of employees between employers of the same industry. For administrative simplicity we try, if possible, to use the union's records as evidence.

In a merger situation the actuary must be particularly careful to guard against antiselection when a company has been in the plan for a relatively brief period. In such a case, it is easy for the acquiring company to dissolve and to liquidate effectively the acquired company and yet come

out ahead because of the vested liabilities for employees in the acquired company. These liabilities may be far out of proportion to the amount contributed by the acquired employer. The vesting provision of the plan should limit liabilities with respect to employees of the terminated employer in some fashion reasonably related to the amount contributed by that employer.

MR. JOHN A. MACDOUGALL, JR.: I would emphasize that it is important for the employer to understand the policy of the union. In other words, he should have an understanding with his bargaining agent regarding his commitment, and the time to clarify any such understanding is at the time the plan is installed or revised, so that the commitment can be carefully incorporated in the design of the plan.

In reviewing a substantial number of contracts, we were quite surprised at the number in which the commitment of the employer was vague. Contracts that spelled out normal cost plus thirty-year funding of past-service or cents-per-hour commitments were in the minority, both in terms of number of plans and in terms of number of employees affected. This lack of reference to any commitment on the part of the employer with regard to the funding in most plans is probably the result of the fact that the very first negotiated plans following the Inland Steel decision in 1949 contained no reference to funding commitments.

DR. CARL H. FISCHER: There is among multi-employer plans a peculiar type of benefit formula which specifies that the retirement benefit will be 2 or 3 per cent of the total accumulation which has been contributed by the employer for the individual employee. Usually that amount of benefit is too large to be supported by the contribution unless there is limited or no vesting and a fairly high turnover rate. It cannot be corrected by the employer's increasing his contribution, because that also raises the benefits. Dr. Stanley pointed out that these plans are fairly common in the construction industry and that the only solution, when the benefits cannot be supported by the contributions, is to reduce the ratio between them.

MR. D'ALTON S. RUDD: Speaking as a member of the Pension Commission of Ontario, we are also very much concerned over the effect of retroactive improvements on other benefits should windup occur. This problem is compounded if money has left the fund to purchase benefits for retired and terminated employees. Our regulations require the actuaries to cut back benefits, if necessary, even though vested under the Pension Benefits Act, but this cannot be done if the funds have been paid over to a

third party, such as an insurer. There is also the problem of the extent to which the government should try to step in and establish priorities in the case of pension plan terminations.

CHAIRMAN CHARLES L. TROWBRIDGE: There is, in my opinion, a certain extra dimension in a multiple-employer negotiated plan that does not exist in the single-employer plan. When a group of employers is brought together, a whole new element of equity is introduced which did not exist before. Most people would agree that the funds could be pooled for investment and expense purposes and perhaps that the mortality experience can be pooled. There is less agreement with respect to pooling of employee termination rates and average retirement ages. The real problems exist with the employer who enters the plan late, the employer who drops out early, and the difference in age, sex, and service distribution.

DR. STANLEY: Another real problem of equity in the multi-employer plan concerns the employers who put in a tremendous amount of overtime. In such cases provisions are needed that would grant greater benefits to the employees of such employers.