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DIGEST OF INFORMAL DISCUSSION

GENERAL

A. What beneficial results were derived from the XVth International Congress of Actuaries? What can be done to make future congresses more valuable? Should any changes be made along the lines of:
   1. Frequency of these congresses
   2. Number of papers from one country on the same topic
   3. Longer synopses of papers
   4. Wider range of subjects

   What can be done to overcome the problems arising from the large attendance?

B. Legislation has been adopted in Canada and is proposed in the United States giving favorable tax treatment to pension contributions by the self-employed.
   1. What plans have been or could be offered to meet the needs of individuals wishing to take advantage of such legislation?
   2. What has been the demand for these plans in Canada?
   3. Have the life insurance companies in Canada been able to attract this type of business in competition with trust companies and investment trusts?
   4. If such legislation results in a demand for contracts with premiums varying year by year with the income of the individual, how can such demand be met?

C. Are there indications that 1957 mortality rates among life insurance policyholders were higher than in years immediately preceding? What significance should be attached to any such results? Could Asiatic influenza have been a contributing factor?

MR. M. A. LINTON stated that he hoped the discussion would develop a number of good ideas as those responsible for planning the XVIth International Congress to be held in Brussels in 1960 would much appreciate them. It was his wish that the program could be developed in such a manner that the discussions might be more informal and spontaneous.

Since Americans are not likely to make up much more than 10% of the total membership of future congresses, the frequency of such congresses will be determined primarily by the European actuaries who comprise the majority of the membership. With the large number of members located in the triangle formed by London, Stockholm, and Rome being

in close proximity to each other, a need is felt for frequent congresses. One of the greatest benefits to be derived from a congress is the personal contacts that develop between actuaries from different countries.

The selection of papers to be presented presents a problem of great difficulty involving appropriate allocation to the various countries as well as the tactful handling of all persons interested in writing papers. The committee on papers for the XVth Congress did an excellent job. Particularly complicated was the publication of papers prepared by members of ASTIN, the new section of the congress devoted to work of actuaries in other than life insurance, because of the large number of formulas.

One of the chief difficulties in the preparation of longer synopses of the papers is the matter of cost. A total of $54,000 has already been spent in printing the transactions and it appears the additional costs may run to as much as $17,000 more.

To cover a wider range of subjects would probably require another business session. It proved impossible in the XVth Congress to have simultaneous sessions in the same hotel because of technical difficulties and translation problems.

MR. DANIEL BARRY presented some statistics with respect to the distribution of papers by topics and countries. Ninety-one papers were prepared by authors from 19 countries. The papers were well distributed among all topics except the topic on population changes where only four papers were presented. If this topic had been broader in scope more papers might have been presented.

The subject of electronic data processing provoked the most interest in the United States and Canada. The eight papers on group insurance came from seven countries, while most of the papers on pensions came from United States, French and Swedish actuaries.

Thirteen papers on classification of risks came from nine countries, while Sweden submitted seven of the sixteen papers on the analytical expression of risks. Fourteen papers on the subject of shortened methods of making actuarial computations were presented from eleven countries, while the subject of population changes aroused little interest except in Germany.

A number of the papers which were presented were of the survey type.

The problems arising from larger attendance might be solved by holding seminars or simultaneous sessions.

Short synopses have generally been found to be satisfactory. A wider range could possibly be handled if simultaneous meetings of the seminar type were held.

MR. A. C. WEBSTER stated that he had received several expressions

of appreciation from persons of other countries who had attended the meetings. He felt that the most beneficial results of such congresses were derived from contacts which were made. It was his opinion that the XVth Congress had done the best job of any of solving the language problem by the method of providing for simultaneous translations.

MR. W. M. ANDERSON discussed the problems created by large attendance at the Congress. He indicated that such large attendance presented a great strain on the social events and felt that some action should be taken to restrict the number of members. If the present rate of increase of attendance continues, very few cities will be able to handle future meetings.

The answer to this problem may lie in redesigning the program structure. Apart from the initial and the ending sessions all discussion sessions should be held simultaneously. This would encourage informality of discussion and automatically reduce the size of each session. With the adoption of simultaneous sessions the number of subjects could be increased.

The development of groups such as ASTIN could lead to separate future congresses which would be devoted to topics primarily of interest to these special groups. These congresses could be held almost simultaneously but would have the advantage that each delegate would attend those sessions which would be of primary interest to him, thus reducing the number in attendance at any one time. This would lead to more beneficial business sessions and more satisfactory social sessions.

MR. B. R. POWER discussed section B from an institutional point of view. There is very little factual statistical information available with respect to participation under the legislation adopted in Canada. This legislation provides a limited income tax deduction to individual savers who purchase retirement savings plans and register them with the Minister of Internal Revenue. In Canada almost any plan but term insurance qualifies for registration. However, with a contract which involves insurance benefits the premium must be split into its insurance and savings elements and only the savings element is eligible for deduction. Registered retirement savings plans may be issued on either an individual or group basis. Although some group plans were registered it appears that very limited use has been made of the group technique.

In addition to life insurance companies, three other types of institution are active in the issuance of registered retirement savings plans:

(1) the Annuities Branch of the Canadian Department of Labour;
(2) the trust companies; and
(3) other savings institutions like the mutual funds and Investors' Syndicate.

Approximately 32,000 contracts were registered for the 1957 taxation year. Of these, about 15,000 were Dominion Government annuities and the remaining 17,000 contracts issued by other institutions including life insurance companies.

Trust companies and investment trusts appear to have registered a somewhat larger number of contracts than life insurance companies. This is undoubtedly due to the fact that policyholders are reluctant to "lock in" their life insurance savings. The flexibility afforded by an unregistered insurance contract has important advantages which offset to some extent the attractiveness of the tax deduction.

Contracts have been developed which provide for some variation in premiums. They are generally of the retirement annuity type and call for the payment of a fixed annual premium with an option to make additional deposits which are applied as single premiums to purchase additional annuity benefits.

MR. M. D. BENNETT pointed out that income tax liability is postponed not eliminated under such plans. When retirement income is received it will be subject to tax but since people will generally be in lower tax brackets at that point, there will presumably be real savings for most people. To qualify, the value of the contract must be used to provide lifetime income beginning not later than age 70. Therefore, companies have introduced endowment at age 70 policies. Also policies have been developed which permit premium payments to vary from year to year as income fluctuates. This type of policy is usually a retirement annuity at age 70 with a level annual premium but with the right to make additional optional premium payments which are, in effect, single premiums to purchase supplemental annuities commencing at retirement.

Although retirement savings plans appeal to a good many people, only a small fraction of the population has taken advantage of the legislation. The reason is that the policies are a good deal more restrictive than regular contracts. The insured cannot borrow on his policy or assign it. Dividends cannot be withdrawn. The only nonforfeiture option available is reduced paid-up insurance and if the policy is surrendered the cash value is treated as taxable income at that time.

Probably more people have registered retirement savings plans with trust companies than with insurance companies. These organizations accept deposits in either a fixed interest or an equities fund. Upon withdrawal, the agreement provides that the accumulations will be used to purchase an annuity from an insurance company or the Canadian government at the rates then available. This trust fund, therefore, provides a

somewhat more flexible arrangement than an insurance policy or retirement annuity.

MR. M. C. PRYCE reported that during a nine month period his company registered about 1,000 policies. In the same period they issued 50,000 Ordinary policies. His company also issues a variable premium rider with a policy year date of December 28. A period of about 60 days is allowed subsequent to the anniversary date in which money can be paid under the rider to qualify for the previous year.

MR. JOHN GORHAM suggested that, in the group field, insurance companies were not, and should not be, completely in competition with trust companies. While with individual persons there might be a strong argument for investing completely in, say, an insured contract, the success of a group plan must recognize the varying circumstances of the individuals composing the group. The National Life of Canada has worked jointly with trust companies in developing a balanced program allowing considerable flexibility to the individual. In particular, these plans allow transfer of monies accumulated in the trust fund to the purchase of pensions at guaranteed rates on retirement.

Some insurers feel it undesirable to write this business on a group basis, regarding the function of the agent in giving individual counsel as fundamentally important. The difficulty here is that if insurance companies do not develop ways of providing the advantages which can exist in group plans, the associations will often turn to other media. He suggested that this would not be in the interest of the individual member.

MR. S. J. KINGSTON pointed out that even though legislation of this nature had not yet been passed in the United States, there was already a demand by groups of self-employed individuals for contracts with premiums varying year by year with income of the individual. His solution to the problem was to permit complete variation without any limitation whatsoever. The National Life offers an annuity contract to groups of self-employed individuals under which any premium can be paid into it at any anniversary date and the contract can be matured at any time up to age 65 with privilege of extending maturity five years. The contract is protected against antiselection by permitting changes in the guarantees on future deposits. There is also a guarantee that if the settlement factors available at maturity in single premium annuities are larger than the amount provided by the guarantee in the contract, the annuitant would get settlement based on the larger factor.

MR. J. O. PARSONAGE described the experience of the Great-West Life under a basic annual premium annuity with a two times deposit provision. Approximately 60% of non-pension trust annuity sales were on

the special plan. Policies have a high basic annual premium averaging over $500 with over 20% purchasing the maximum amount available. Approximately 50% of the policyholders made deposits under the special provision.

MR. W. A. JENKINS described the individual deferred annuity contract offered by his company for nearly 40 years. The contract provides that the premium may be increased in any month and, as a matter of practice, premium decreases are allowed. With systems designed for such a contract, Mr. Jenkins reported, no unusual operating problems have been encountered. For financial protection, contracts issued in the last 17 years have included provision for changing the benefit guarantees for future premiums at any time.

MR. C. M. SIEGEL reported that the Canadian Medical Retirement Savings Plan had aroused considerable interest in the split funded type of arrangement amongst other Canadian professional associations. In many of these associations a substantial proportion of the membership is employed, often by organizations with a small staff. The National Life of Canada is developing a new type of arrangement whereby an association-wide registered retirement savings plan is combined with registered employer-employee pension plans under the same bank—trust company—insurance company administrative set-up. The employee participant has complete freedom of allocation of his own contributions between common stock and insured annuity. Employer contributions are applied to purchase insured annuities. One of the major advantages of such a plan is that pensions would be portable and the participant could transfer from the registered pension plan to the registered savings plan with little difficulty.

MR. N. F. BUCK, in discussing section C, stated that the number of direct Ordinary policyholders on whose lives his company paid death claims in 1957 increased 2% over 1956. Chief increases were caused by cirrhosis of the liver, nephritis and malignant neoplasms. A number of causes of death showed decreases, including pneumonia, influenza, suicide and accidents. If Asiatic influenza was a significant factor it operated indirectly by causing increases in deaths from other causes.

A study was made of the experience during the first three policy years using Table X_{18} select as a basis of expected mortality. These ratios were higher for 1952–56 anniversaries than for 1948–52 anniversaries and were higher for reinsurance than for direct business. This might indicate that competitive pressures were being yielded to and that borderline cases may have been getting the benefit of the doubt.

MR. F. H. DAVID reported that Prudential Ordinary mortality was

somewhat higher in 1957 than in the years 1954 to 1956. While an analysis by cause did not reveal any marked increase in deaths from respiratory diseases, a sample of death certificates revealed that in many instances influenza, though not given as the "underlying" cause which was coded, was mentioned as a secondary cause; it seemed certain that it contributed in some degree to the increased mortality.

MR. E. A. LEW reported that mortality on Ordinary insurance was 1.8% higher in 1957 than in 1956 while that on Industrial insurance and Group insurance was about 3.5% higher. The higher death rate appeared to be largely accounted for by increases in the death rates from influenza and pneumonia, and cardiovascular-renal diseases.

The influenza epidemic was undoubtedly the major factor in the increase in mortality. It produced higher death rates from influenza, pneumonia and cardiovascular-renal diseases. The outstanding characteristic of the epidemic was that it struck preponderantly at the older ages and the infirm. Mortality from influenza, pneumonia and the associated cardiovascular-renal diseases continued at a high level into the first quarter of 1958, when over 70% of the deaths due to influenza and pneumonia were reported at age 55 and over. To the extent that the influenza epidemic merely hastened the death of many impaired lives, it may be compensated later on by a temporary reduction in the mortality at the older ages.

SPECIAL POLICIES

A. Family Plan
   1. How popular have family plans become with the insuring public? What are the reasons for the interest in family plans? Is the proportion of policies issued on the family plan likely to decline as this type of business gets more seasoned? Is the family plan reducing the market for juvenile insurance; industrial insurance?
   2. Have some companies decided against the issue of family plans? What reasons are there for such a decision? Can companies not writing the family plan avoid lapse of existing business?
   3. Does the family plan give rise to an unusual number of requests for policy changes? Do companies expect to permit changes or conversions of other policies to the family plan? What solutions have been found to the problems arising from change in family status, particularly divorce and remarriage?

B. Bank Loan and Split Dollar Plans
   1. How much demand is there for special policies to meet the particular needs of the highly paid? What unusual features do such special policies usually contain?
   2. What lapse rates are experienced?
   3. Is it likely that the U.S. Treasury Department will impose limitations on the sale of Bank Loan Plan policies?

MR. P. H. KNIES explained that the Metropolitan's regular family policy is sold in multiples of half units from a minimum of one unit to a maximum of three units. One unit provides $5,000 of endowment at 85 on the husband, $1,250 (variable by relative age) of term insurance on the wife to the husband's age 85 plus a small pure endowment, and $1,000 of term to 25 on each child under age 18 at issue. Another policy provides smaller amounts on the husband and wife—$3,000 on the husband and $1,000 on the wife.

Of policies issued for $1,000 or more, family policies now comprise 17% of the total by number and 28% by amount of insurance. In the $2,000 but less than $5,000 range, family policies are 36% by number and 51% by amount. In the $5,000 but less than $10,000 range, they are 40% by number and 45% by amount. Amounts for family income riders are excluded from the above percentages.

Family income riders are included in 63% of the $3,000 family policies and 80% of the $5,000 or more family policies. Premiums are payable on a monthly basis for over 75% of the family plans. The introduction of the

family policy has resulted in a smaller volume of juvenile insurance under other policies; however, the amount of this decrease has been offset many times by the coverage for children under family policies.

MR. R. E. EDWARDS stated that in the first six months following the introduction of Baltimore Life's family plan in January 1957, it comprised 16% of their Ordinary new business by number, but it has recently dropped to 10%. He ascribed this decrease, in part, to the introduction of an Industrial family policy plan in October 1957. In the last three months of 1957, 32% by number and 52% by amount of their Industrial new business was issued on the family plan. This last percentage ignores term insurance on the wife and children. Mr. Edwards described their Industrial plan as providing $1,000 of whole life insurance on the husband, $500 of term to 65 (varying by age) on the wife and $500 of term to 21 on the children, with premiums level for life.

MR. H. A. GARABEDIAN described the John Hancock's family policies. The first policy, introduced in July 1957, provides $5,000 of whole life on the husband, $1,000 of paid-up at age 65 on the wife and $1,000 of term on the children. The second policy, introduced in October, is essentially the same as the first except that only $3,000 of insurance is provided on the husband's life. Of their Ordinary issues for $3,000 or more, over 44% by volume were on the family plan in the first few months after its introduction. By the end of 1957, this same proportion still applied to all premium notice business for amounts of $1,000 and over. On Monthly Debit business, the family policy volume is a little more than a third of the total. While 44% Ordinary premium notice business is on the family plan, the percentage is 55% for Debit agents compared to 16% for Ordinary agents. Mr. Garabedian stated that while there may be some leveling off in the sale of the family policy in the future, there is as yet no evidence of such a decline.

MR. V. E. HENNINGSEN gave the Northwestern Mutual's reasons for not offering the family plan. First, he stated that the lack of provision for permanent insurance on dependents is undesirable from the standpoint of both their policyholders and their agency force, and that results of their market analyses indicated that many of their policyholders are in position to and want to provide substantial amounts of permanent insurance on the lives of their children. While the family plan might be a good door opener in some situations, he felt it provides too rigid a form of benefits and creates the impression that one contract adequately covers the whole risk. Furthermore, his company doubts that the family plan will produce sufficient sales volume among their middle to high-income bracket clientele to justify its being offered. Concluding, he stated that the

Northwestern Mutual has been successful to date in avoiding lapses to the family plans of other companies.

MR. J. A. CAMPBELL commented on the reasons the London Life decided not to offer a family policy. It did not fit into the programmed selling approach they had developed and would, therefore, be of little value to their Ordinary salesmen and might unfavorably change the way in which their debit salesmen have been operating. With average production of Ordinary salesmen at $441,000 and of Debit salesmen at $323,000, the promotion cost and abandonment of their traditional methods of selling, which would be involved in the promotion of the family plan, did not seem worth while. His company feels that a family plan can be developed from individual policies, which, while having a higher aggregate premium, do offer substantial guaranteed values and flexibility of individual coverage. While they have had some lapses due to the family plan, they feel they are in a better position to prevent lapses to family policies than a company which is selling the family plan.

MR. T. M. GALT also objected to the family plan's providing for only term insurance on the children. His company, the Sun Life, feels the extra money would be better used to provide additional insurance on the husband. To accomplish this, they have introduced a 5-year convertible and renewable term rider to be added to a basic policy on the life of the husband. Mr. Galt also felt that term insurance may not be best for the wife and that there is little or no cost advantage for an average sized family in buying the family plan as compared with separate contracts. Very few of their agents appear to want a family policy and they have lost relatively few sales in competition with the family policy.

MR. J. G. BRUCE explained why his company first decided to refrain from issuing the family plan but later offered it. In addition to objections to the plan cited by previous speakers, Mr. Bruce mentioned the anti-selection by families with a large number of children, that the family plan is frequently misunderstood and has created some confusion, and that a large number of their better agents were against offering it. He then explained that heavy competitive pressure forced his company to reverse its position. They now have a family plan in their portfolio but argue in their sales brochure that a tailor-made plan based on permanent insurance and separate policies is superior. Mr. Bruce also felt that the replacement of existing business by family policies is an unhealthy situation and cannot be fully avoided by a company, whether or not it offers a family plan of its own.

MR. F. W. CLARK pointed out that while there are a number of valid objections to the family plan, it provides one practical way of re-

ducing the high ratio of expenses to benefits in providing insurance for juveniles.

MR. A. C. WEBSTER pointed out that similar objections and predictions of dire effects on the industry were made at the time family income plans were introduced some years back. He felt that the most important thing about the family plan is that it serves an actual need.

MR. L. M. DORN stated that the family plan accounts for 25% of the New York Life's new business or $600 million a year. His company has had few requests for changes involving this plan. In general, a change from one plan to another will be made within six months of issue, on the general grounds that the sale was perhaps not right in the first place. In the event of divorce and remarriage they make no change and continue the original wife under the coverage, since their rates do not contemplate a shift from coverage on the wife, with lighter female mortality, to the husband with heavier male mortality. They do not offer a one-parent policy.

MR. J. M. BRAGG stated that since the introduction of their family policy in July 1957, Life of Georgia's Ordinary sales have doubled by volume and increased 18% by number of policies. There has been no drop-off in the proportion of business issued on this plan, which now represents 32% by number and 56% by amount. He expects, however, that the proportion will ultimately decline. The introduction of the family plan has reduced their market for other Ordinary plans by about 20%.

Mr. Bragg stated that the family policy has not given rise to an unusual number of requests for policy changes. They allow changes to the family plan only on a current dating basis. With evidence of insurability, the wife's coverage can be transferred to the husband, and upon remarriage to the new wife. Since their plan provides a flat amount of $2,000 on the wife, they do not get involved in the complications of changing the amounts of insurance in the above transactions. Since premiums on wives do vary by broad age groups, they sometimes get involved with premium changes, however.

MR. J. J. MARCUS stated that while the number of requests for changes has been surprisingly small, the Prudential has had some requests to change policies to include dependents originally excluded. Sometimes the company is requested to reinstate a policy where a dependent is no longer acceptable from an underwriting standpoint or is unavailable for underwriting. His company does not permit changes of policies covering individuals to the family plan since the premium is computed on the assumption that dependent lives will be underwritten at the same time as the husband and any additional issue expenses will be

extremely small. Within six months of divorce or legal separation, his company permits transfer of term insurance on the wife to the husband without evidence of insurability. After six months, evidence is required. Similarly, in the event of remarriage, transfer of term coverage to the new wife is permitted—without evidence within six months of remarriage and with evidence beyond that. Both transfers are accomplished by policy amendment. Since changes in status of children are handled automatically by the policy terms, no problems are involved other than on reinstatements where a child may no longer be living with his parents.

MR. R. T. JACKSON, speaking on section B, described the Phoenix Mutual's experience with their new policy introduced in September 1956, providing full reserve cash values in the first year, to accommodate split dollar and bank loan business. Probably because of the jump in interest rates in 1957, they have written little of either type of business. However, with use of policy loans, the new policy has proved popular. Mr. Jackson mentioned that initially too many policies were sold to applicants in low income groups who could not afford to renew their insurance after the first year. Also, there was misuse by agents writing it on their own lives to qualify for additional financing, company clubs, conventions, etc. The result was that on issues in the early months, lapse was considerably higher than that on regular annual premium business and approximately as high as that on all premium payment frequencies combined.

While these practices have been largely eliminated, there has not been sufficient time to test the tightening of underwriting practices to meet the general problem of higher lapses.

In commenting on subsection 3, Mr. Jackson stated that any regulation or law consistent with what he understands to be the Treasury Department's position would have to be based on the entirely subjective principle of "what was the buyer's intent." The only workable procedure operating on this principle would be to disallow interest deductions on loans made in the first policy year, and this would not substantially increase the Treasury's income.

Mr. Jackson questioned the existence of any tax "loophole" on which the Treasury Department's suggestion is predicated, since a policyholder borrowing on his insurance is in the same tax position as the policyholder paying the full premium if the borrower invests the borrowed funds at precisely the policy loan interest rate. If his income on the borrowed funds exceeds the policy loan rate, he pays more tax than the nonborrower—only if it is less does he pay less tax.

MR. E. A. DOUGHERTY stated that the Union Central introduced a policy in December 1956, which not only provides cash values at all

times equal to net level premium reserves but also provides an additional increasing death benefit to offset the increased obligation against the policy. During the extra death benefit period, which for issue ages 29 and under is 35 years, for issue ages 30 to 55 is to age 65, and for issue ages 56 to 70 is 10 years, the amount of insurance is the face amount plus the cash value at the end of the policy year of death. One policy with a $25,000 minimum is on a preferred underwriting basis; the other with a $10,000 minimum is on a standard underwriting basis. A commission scale of 25% first year and nine 10's was adopted.

In 1957, $88 million of new business, equal to 45% of the Union Central's total new business, was on this plan. The average face amount of the $10,000 minimum policy was $23,249 and the average face amount of the $25,000 minimum policy was $53,672. 75% of the cases were issued with policy loans.

Mr. Dougherty stated that the large proportion of business written on these plans raised a number of problems. An unduly large policy loan account could be built up. Heavy lapses could result from a business recession or governmental removal of the tax deduction allowed on the interest. In some cases, contracts with full policy loans might be used in lieu of term insurance. Setting up net level reserves instead of preliminary term reserves produced a considerable strain on net gain from operations.

Therefore, to decrease the proportion of business written on these plans, his company raised the minimums to $25,000 and $50,000 and reduced the limit on one life to $250,000. Since these steps did not sufficiently reduce the emphasis on the plan, they began to ration the amount they would accept from each agency. While each policy is followed up individually, Mr. Dougherty stated that their lapse experience has nevertheless been poor. For business renewing in December 1957 and January 1958, the lapses were 29% by number, 23% by amount of insurance and 18% by amount of premium—twice the normal first year lapse rate.

He felt that in spite of the problems, the over-all effect of this plan has been good for his company because of its stimulus to the sales force, and its opening the door to some substantial, desirable markets.

MR. A. L. MAYERSON asked whether any insurance departments questioned whether these high early cash value policies are self-supporting, whether a first year dividend is earned, or whether they conflict with the antidiscrimination statutes.

MR. A. T. BUNYAN, in reply, stated that his company was able to establish to the satisfaction of the New York Department that they were in a position to pay the full reserve as cash value at the end of the first

policy year in view of the reduced first year commission scale, large average sized policy and the fact that the compensation of their manager due to the sale of any policy is charged back if that policy lapses within its first four years. Unlike the remainder of their business, the first year dividend on this policy is contingent on the payment of the second year premium.

MR. E. A. DOUGHERTY pointed out that the high early cash values of his company's policies are reflected in the premium rates.

GROUP ACCIDENT AND HEALTH

A. What has been the recent claim experience under group major medical insurance (1) of the superimposed-over-basic-coverage type, (2) of the low-deductible-without-basic-coverage type? As to the latter, has the experience been less satisfactory where the deductible or coinsurance features have been eliminated as to portions of the hospital or surgical expense?

B. In what ways is electronic equipment being used in premium billing, claim analysis, experience rating calculations, or other applications in the group accident and health field?

C. In what respects do the Blue Cross–Blue Shield associations operate differently from insurance companies doing a group accident and health business? In what ways are these operations similar? Do the differences tend to diminish or to increase with the passage of time? What rate and procedural changes are these associations making?

D. What are the recent developments in Canada with respect to plans offered and insured by government? What do these developments portend with respect to nongovernmental insured accident and health plans?

MR. R. H. MAGLATHLIN, opening the discussion of section A, related the recent experience of the Travelers. Under superimposed major medical insurance the Travelers covered over 2,200,000 persons on about 600 risks while under comprehensive medical expense insurance they covered approximately 100,000 people on about 400 risks. Plans were written under three main concepts depending on how the deductible is satisfied: the "calendar year" concept where charges incurred during the calendar year from all causes are used; the "per cause" concept where charges for one particular cause incurred during a specified period are used; and the "per cause" concept modified by restricting covered charges to those incurred during total disability plus certain periods of diagnosis and convalescence.

In order to make loss ratios on the various plans comparable, an attempt was made to adjust premiums to a consistent rate level. On the majority of "calendar year" plans, such adjusted loss ratios exceeded 100%, on the "per cause" plans without a total disability requirement they ran between 70% and 90%, while on the "per cause" plans with a total disability requirement they were generally below 50%. The experience, therefore, might be considered very poor on the "calendar year" plan, normal on the "per cause" without total disability plan and exceptionally good on the "per cause" plan with a total disability requirement. The majority of their comprehensive plans have been under the "calendar year" concept and the experience has been very poor.

Mr. Maglathlin was not convinced that the comprehensive approach *as now written* is preferable to a base plan with superimposed major medical. The comprehensive plan tends to feel the full impact of inflation to a greater extent than a base plan with inside limits supplemented by major medical insurance with a corridor deductible. Comprehensive plans with substantial areas of in-full coverage apparently lack sufficient coinsurance and, since the cost increases faster from year to year than under a superimposed plan, serious problems confront the employer involved in collective bargaining.

Mr. Maglathlin urged a reappraisal of the relative worths of deductibles on the "per cause" and "calendar year" bases. He also urged companies to contribute to intercompany studies by the Society so that more knowledge will be at hand to advise employers and so that more adequate and proper coverage may be provided at a reasonable cost.

MR. D. D. CODY reported on a New York Life study of claims on nonsupplementary major medical cases of less than 100 lives for policy years ending in the 12 months period from December 1956 through November 1957. Most cases had first dollar hospital coverage without coinsurance for the first $500 and 20% coinsurance together with a $50 calendar year deductible and 20% coinsurance on other medical care charges. After premiums were adjusted to their undiscounted current premium basis, an over-all loss ratio of 93% emerged (102% for Pacific Coast and Mountain States, 77% for all other areas). Based on current costs, these loss ratios would be 5% or 10% greater. This led to a premium increase in April 1958 averaging 25% to 30% on a typical distribution of business. To effect this increase, many sections of the country were reclassified to higher area classifications and in addition area loading factors were increased as follows:

Area Classification	Area Loading Factors		Area Classification	Area Loading Factors	
	Old	New		Old	New
1	82%	90%	6	112%	140%
2	88	100	7	118	150
3	94	110	8	.....	170
4	100	120	9	.....	190
5	106	130			

For reference, Chicago is classified in Area 4, New York in Area 5, and San Francisco and Los Angeles in Area 7. It is expected that Areas 8 and 9 will shortly be used.

As to supplementary major medical plans, adjusted loss ratios ran 86%, implying perhaps a 90% to 95% ratio today. Rates on these plans will be increased 20% in June 1958.

MR. B. E. BURTON presented superimposed major medical experience for the Aetna Life for the calendar year 1955. A substantial amount of first year experience is included. All plans supplemented an Aetna program of basic benefits.

The 1955 experience on superimposed major medical, $100 deductible, calendar year plans, on groups with less than 11% of employees earning $10,000 or more, is shown in Tables 1, 2 and 3. Although the experience

TABLE 1

	Annual Number of Claims per 1000 Employees, Spouses or Employees with Children	Average Total Covered Expenses	Average Basic Plan Payments	Average Expense in Excess of Deductible* and Basic Payments
Employees				
Under age 40.....	17	$642	$302	$247
40 to 49.....	38	691	331	270
50 to 59.....	61	789	376	321
60 and over.....	83	1064	431	541
All employees...	32	752	348	312
Claims with Payments by the Basic Plan.....	27	836	408	334
Claims with no Payments by the Basic Plan.....	5	262	0	182
All Male Employees	31	759	353	315
All Female Employees.....	41	713	325	296
Dependent Spouses				
All Claims.....	41	698	304	302
Claims with Payments by the Basic Plan.....	34	795	369	332
Claims with no Payments by the Basic Plan.....	7	244	0	161
Dependent Children				
All Claims.....	15	584	239	253
Claims with Payments by the Basic Plan.....	11	691	313	281
Claims with no Payments by the Basic Plan.....	4	238	0	163

* The "deductible" for each claim is the cash deductible adjusted for the 3 months "carry-over" of expenses incurred and applied against the deductible in the last three months of the prior calendar year.

appears favorable, expenses in the study did not include expenses incurred subsequent to 1955 on individuals disabled at the end of 1955 even though such expenses are covered under the plans in the event of cancellation of the contract. This fact together with current loss ratio studies indicates that the current cost of the major medical benefits provided by

TABLE 2

NUMBER OF CLAIMS AND EXPENSES IN EXCESS OF BASIC PAYMENTS AND THE DEDUCTIBLE BY SIZE OF DEDUCTIBLE

Assumed Deductible	Aged 60 or Over		All Adult Claimants		Dependent Children	
	Number of Claims	Excess Expenses	Number of Claims	Excess Expenses	Number of Claims	Excess Expenses
$ 100	100%	100%	100%	100%	100%	100%
200	68	84	63	74	53	70
300	47	73	40	57	31	55
500	29	58	20	39	14	39
1,000	16	38	7	20	6	23
Number of Claims	273	.....	2,913	.....	383	.....
Average Excess Expense	.....	$516	.....	$308	.....	$253

these plans is perhaps 40% greater than indicated in the tables. A summary of the more important statistics follows:

(1) The variation in claim frequencies by age is very marked with frequencies at ages 60 or more almost 5 times those at ages under 40. The average claim payment at ages 60 or more was about $2\frac{1}{6}$ times that at ages under 40. Employees aged 60 or more had a claims cost $4\frac{1}{2}$ times as high as the average employee claims cost for all ages.

(2) 17% of the major medical claims did not involve any benefit payment under the basic plan and the major medical benefits for such claims accounted for about 10% of all major medical benefits.

(3) Female employees and dependent wives had a claim frequency approximately $\frac{1}{3}$ higher than for male employees with an average claim payment approximately the same as for male employees.

(4) Dependent children units had a claim frequency about $\frac{1}{2}$ of the male employee claim frequency with an average claim payment of approximately 80% of the average payment for a male employee.

(5) About 23% of the adult claims and 28% of the children claims did not involve hospital room and board charges.

(6) The percentage of hospital days in private room accommodations was about 40% for adults and 30% for children. These percentages were

surprisingly high and indicate that the industry's willingness to write major medical plans with high private room limits has probably resulted in the provision of benefits for a substantial amount of luxury care.

Mr. Burton disagreed with Mr. Maglathlin on the relative advantages and cost of "per disability" and "all cause calendar year" major medical plans. He doubted that there is any substantial difference in cost between the two plans. He pointed out that ever since 1953, when his company first introduced the calendar year all cause deductible plan, the experience indicates an average loss ratio of about 70% of current premiums.

TABLE 3

PERCENTAGE DISTRIBUTION OF CLAIMS AND TOTAL COVERED EXPENSES (INCLUDING EXPENSES REIMBURSED BY THE BASIC PLAN) BY TYPE OF EXPENSE AND OTHER RELATED STATISTICS

TYPE OF EXPENSE	PERCENTAGE OF ALL CLAIMS WITH EXPENSES OF THE TYPE INDICATED			PERCENTAGE DISTRIBUTION OF COVERED EXPENSES BY TYPE OF EXPENSE		
	Employee	Spouse	Children	Employee	Spouse	Children
Hospital Room and Board	77%	77%	72%	26%	23%	26%
Hospital Miscellaneous Fees	77	78	74	23	23	24
Surgical Charges	54	62	57	20	23	23
Physicians' Fees	88	84	82	18	18	16
Nurses' Fees	15	17	10	6	6	3
X-Ray and Laboratory	46	31	32	2	2	2
Drugs and Medicines	52	55	46	4	5	4
Supplies	6	6	7	*	*	1
Other	12	11	10	1	*	1
Total	.....	.....	.....	100%	100%	100%

	Employee	Spouse	Children
Percentage of Hospital Days in a Private Room to all Hospital Days			
All Claimants	40%	41%	30%
Claimants Aged 60 or over	45%	60%	.....
Average Duration of Hospital Confinement in Days			
All Claimants	18	15	16
Claimants Aged 60 or over	24	18	.....
Percentage of Claims with Nurses' Fees, Claimants Aged 60 or over	26%	23%	.....
Percentage Nurses' Fees to all Covered Expenses, Claimants Aged 60 or over	12%	16%	.....

* Less than .5%.

With respect to comprehensive plans with a low deductible and no basic plan, Aetna's over-all experience has been unsatisfactory. The current over-all loss ratio on such plans is estimated to be in the neighborhood of 82% to 85% of their current scale of manual premiums. Loss ratios have been most unsatisfactory in the Los Angeles area and in Texas where the loss ratios are 100% or more.

There seemed to be a tendency for plans with the deductible and co-insurance features applying to all expenses to be written only on cases with a very unsatisfactory basic hospital-surgical experience. The offer of such a plan to an employer seems to coincide rather frequently with the delivery of a rate increase. Therefore, comparisons of experience between the two plans are difficult. However, on several large cases written early in 1956 with a prior history of favorable basic benefits experience, the comprehensive loss ratios appear to be more favorable on plans which apply the deductible to all expenses than on plans which remove the deductible for hospital expenses.

A preliminary analysis was made of the claims incurred in 1956 under two large comprehensive plans written early in that year. Since these two plans provided a deductible graded by salary, all claims with total expenses less than $100 were eliminated. In order to make a common analysis of the claims, the variation in claim frequencies, average claim payments, and claim costs by age was much less than the corresponding variation under a superimposed major medical plan. For example, the employee claim frequency at ages 60 and over was only 1.9 times the corresponding claim frequencies at ages less than 40, and 1.6 times the over-all average claim frequency. Similarly, the average claim payment at ages 60 or over was about 1.9 times the average claim payment at ages less than 40, and about 1.4 times the over-all average claim payment. The claim frequencies for dependent wives and for dependent child or children units are approximately 135% to 140% of the over-all average employee claim frequency. The average claim for a dependent wife was slightly less than the average claim for employees, and the average claim for dependent children was about $\frac{1}{2}$ of the average claim for employees. The use of private room accommodations by the employees insured under these plans was only slightly less than the utilization described earlier for superimposed major medical insurance.

MR. W. S. THOMAS said that the Metropolitan's experience on superimposed major medical has continued at a satisfactory level, especially for dependent coverage. Experience on comprehensive plans has also been quite satisfactory where exposures were sufficient to form a definite opinion.

Current difficulties with experience under comprehensive plans, especially where there are areas of full coverage, may be due in part to the rationale used in developing premiums for these plans. One approach is to base the premiums on the superimposed type, and build down. The other, used by the Metropolitan, is to base the premium on a combination of basic plan and superimposed plan experience, and build up.

The Metropolitan estimated that the premiums required for the various types of expenses are approximately as follows: hospital, 50%; surgical, 18%; maternity, 12%; and all other expenses 20%. The hospital portion of the premium was based on current experience on plans providing very liberal benefits with subsequent adjustment for the deductible and coinsurance features. Current experience and other published data gave some indication of average surgical charges in various localities, although considerable judgment was required since the comprehensive plan does not contain a definite surgical schedule. Maternity benefits are usually for a fixed amount and that portion of the premium may be estimated fairly accurately. Thus 80% of the premium is based on fairly reliable statistics. On the remaining 20%, for "all other expenses," premiums were based on experience on superimposed plans. Since superimposed plans have higher deductibles than the $50 typical of comprehensive plans, it was necessary to estimate the effect of the lower deductible. This approach, to date, has resulted in premiums on a satisfactory basis.

In connection with a quotation for a change from a typical basic hospital-surgical plan to a comprehensive plan, the experience under the basic plan must be given considerable weight. The Metropolitan obtains the cost of the employer's existing plan, increases it by the amount necessary to provide the additional benefits, and then gives credit for the deductible and coinsurance features.

Mr. Thomas expressed surprise at seeing quotations for the comprehensive plan at approximately the same level as a basic hospital-surgical plan. He also cautioned that when an age credit is given on a plan for a young age distribution, the cost for the maternity benefits should be increased.

Inasmuch as only about 20% of the premium involved is in really uncharted waters, Mr. Thomas does not think it is appropriate to explain inadequate premiums entirely by the fact that we are going into uncharted areas. Sound actuarial analysis should minimize the emergence of inadequate premiums.

MR. R. J. MELLMAN indicated that the claim experience of the Prudential on superimposed plans was substantially superior to that on comprehensive plans. Rate increases of 10% to 20% were made in June 1957 to correct this situation. The zero deductible surgical provision was largely

withdrawn. Comprehensive plans produce particularly bad experience in certain areas, as for example, in some Gulf Coast areas.

Difficulties in claim experience cannot be attributed solely to the kinds of plans being sold, but probably are due in large part to inadequacy in rate making. Available statistics are inadequate as to the effect upon rates of area, deductibles of $50 or less, and the relation between per illness and per individual coverages.

Since area adjustment factors are not subject to accurate predetermination, it is necessary to study actual claim experience and reclassify areas periodically.

For $100 and larger deductibles, Prudential rates were determined from data in a paper by Alan M. Thaler in *TSA* III. Rates for $50 deductible plans were obtained by extrapolation, resulting in an overly optimistic rate level.

Per illness and per individual coverages are being studied and compared. Preliminary results seem to indicate that there will be less than 5% difference in claim cost between $50 deductible per individual plans with a 90 day deductible accumulation period and $50 per illness plans.

MR. M. D. MILLER reported that the experience of the Equitable Society so far on comprehensive plans appears to have been quite unsatisfactory. On superimposed major medical insurance, however, indications are that their experience is still running at a satisfactory level.

MR. R. E. TRABER, in discussing section B, related the use made of electronic equipment by the Equitable Life Assurance Society. Having devoted themselves first to the Ordinary field, the Society has recently begun to use electronic equipment on group functions.

As an initial step a 650 program was written to accumulate premium and claim information, basic material for dividends and statistical studies of morbidity and mortality, as well as policy exhibit in-force statistics. The preparation of a basic file on punch cards was an operation of considerable magnitude. When it became apparent that the running time on the 650 would be longer than anticipated, the material was reprogrammed for the 705.

At about the same time, a 650 program was developed to compute dividend projections on new groups. This is a simpler task than programming for actual cases. After encouraging results on dividend projections in the fall of 1956 using the 650, a program for calculating dividends on actual cases was developed for the 705 by the fall of 1957. Currently about 99% of group dividends are calculated by electronic means. The input is on cards punched by hand, but it is expected that these will be replaced in the future by magnetic tape, itself the output of other systems.

Current plans are to enlarge the program now on the 705 to incorporate claim reserves and incurred claims so that the material can be summarized into dividend experience units for input into the dividend computation. Consideration is also being given to automatic machine renewal underwriting in certain areas.

Going beyond this into the future, plans are to work next on premium billing and accounting, followed by the computation of commissions.

In addition to recurring jobs, many individual jobs have been programmed. The 705 was used in the compilation of the Intercompany Surgical Study. Programs for the 650 include computation of major medical and health care premiums, development and testing of hospital-surgical premiums, and certain year-end operations which in the past could be done only with considerable overtime.

MR. R. E. SHALEN introduced section C by discussing the diminishing differences between Blue Cross–Blue Shield associations and insurance companies.

The Blues were organized as community enterprises to assure doctors and hospitals that they would be paid, by means of a convenient plan of prepayment, for care rendered to subscribers. The insurance companies have been primarily concerned with the subscriber himself. The local community concept has been modified to provide national coverage in competition with the companies by the formation of Health Service, Incorporated, the so-called national Blue Cross.

The Blues have offered a service type of benefit whereas companies have stressed the cash indemnity benefit. The growth of major medical and comprehensive plans has reduced this distinction.

Traditionally the Blues charged the same rate to all subscribers but, under competitive pressure, they now are tending toward the company practice of merit rating. Plans with merit rating include Pittsburgh, Washington, D.C., New York City, Massachusetts, Missouri, Kansas and North Carolina. In conjunction with merit rating, the Blues have liberalized benefits and practices which were more necessary when everyone paid the same rate.

Rising costs have presented serious problems with many Blues requesting rate increases, varying up to 50%. State Insurance Departments are resisting increases of the requested magnitudes. Any disturbance of the tax-exempt status of most Blues would accentuate the need for increased rates. In 1957 Indiana became the first state to impose a premium tax on a Blue Cross–Blue Shield plan.

Under competitive pressures, differences between the Blue Cross–Blue Shield associations and insurance companies are diminishing. Joint efforts

may be made to solve common problems, including the rising costs of medical care and the question of whether voluntary nongovernment agencies can do the job of providing insurance protection for the people of the United States and Canada.

MR. S. S. LIPKIND, of the Hospital Service Association of Western Pennsylvania, stated that there are 85 Blue Cross plans in the United States and Canada. There are 70 Blue Shield plans integrated or associated with these Blue Cross plans. The operations of these plans are determined by the special enabling acts under which they are incorporated, by the approval standards of their national associations and, most important, by the objectives which led to their formation.

Since the plans are independent corporations under local control, there are variations among them in certain respects of their operations. There is, however, uniformity in the basic concepts of their operation which are:

1. To function on a nonprofit basis.
2. To furnish health care services rather than reimbursing expenses incurred on illness.
3. To enroll the community as a whole in support and maintenance of its health care services by prepayment.
4. To issue certificates whose coverage is adequate as regards essential health care services.
5. To contract with the purveyors for reimbursement on an equitable basis.

As to the difference between Blue Cross–Blue Shield and insurance company operations it appears then that in principle the operation as a whole is different. Consequently in various respects the operation of plans contrasts with insurance company operations. To review some of these briefly:

Enrollment and Underwriting. Plans have salaried enrollment personnel. The minimum size group is generally five employees. At the other end the range is from a minimum of ten employees where ten or more are employed to 50% of 500 or more employees. The majority (60%) of the plans have no age limits at enrollment. In all plans there is no age limit for continuation of coverage.

Certificates and Benefits. The plan subscriber is issued a certificate instead of being covered under a master contract made with his employer. The subscriber retains his certificate upon separation from the group and is covered under its conversion provision. There is no terminal maternity provision. The plan will not have a large variety of certificates. Usually there will be a standard one providing for stay of 21 or 30 days per illness. The plan is also likely to offer a comprehensive certificate with 70 or more days coverage, eliminating or modifying some of the exclusions of the

standard. More stringent underwriting requirements may apply to the comprehensive certificate. About one third of the plans are offering deductible coverage. So far about one fourth have introduced major medical type of benefits. The typical benefits of the standard, comprehensive and deductible certificates are semiprivate accommodations and full ancillary services of the hospital. Commonly excluded or limited are admissions for mental disorders, for primarily diagnostic procedures, and for services such as blood, blood plasma, and ambulance. The significant feature of Blue Shield is that in about two-thirds of the plans the participating physicians agree to accept the scheduled fees in full payment for subscribers whose income does not exceed certain limits.

Rates. With a few exceptions plans have uniform rates for all groups. In most cases there are two classifications, one-person and family. Several plans separate the one-person classification by sex. Other classifications of some plans are two-person, parent and children, and sponsored dependent.

Blue Cross–Hospital Relationship. The Blue Cross movement was sponsored by hospitals and the Approval Program requires that hospital representation constitute at least one third of each plan's governing board. Reimbursement to hospitals may be their regular charges, a percentage of charges or a periodically computed per diem cost. In connection with the criticism that Blue Cross subscribers get preferential treatment, plan spokesmen point out that Blue Cross enrollment practices and rate structure carry a large part of the community that otherwise would be medically indigent.

The extent to which these practices differ from insurance group practices reflects the objectives of the plans for local operations according to their concept of their role. Similarities arise from competition, particularly on other than a local level. The issuance of deductible certificates by a number of plans, not without some misgivings, appears to be a concession to insurance concepts. Major medical is an insurance innovation, though in their offerings plans are attempting to emphasize prolonged illness care rather than protection against high charges. Recent rate and procedural changes are evidence of the plans' efforts to retain and enroll groups whose allegiance to the community enterprise is threatened by their requirements for uniformity on a nationwide basis. These changes involve mutualization of plans' experience, uniform benefits, practices and servicing, and experience rating. The Blue Cross Association has been activated to coordinate the plans' handling of national accounts.

Do the differences tend to diminish or increase with the passage of time? This question calls for a prediction. The pat answer would be that the

market will determine the course of our enterprises and its demands will tend to level out differences. However, this assumes that the market has unity and disregards the fact that the market can be influenced by ideas. Plan executives are aware of the sales job the insurers have done for their concept, particularly to management, and with the major medical idea. They feel they can present a convincing case for the community participation idea. They also see the hospital developing as the community center not only for the care of illness but also for its prevention and feel their traditional operations are geared to the role of the hospital in the future.

DR. C. H. FISCHER commented that Blue Cross–Blue Shield Associations are increasing their rates to the maximum that the insurance commissioners in the various states will permit. Constantly increasing hospital costs have operated to revise rates upward continuously almost from the beginning of the movement. Recently resistance has been met, particularly from labor unions which exert political pressure to have such requests for increases denied in whole or in part. Since the plans operate on a very slim expense margin and have comparatively small reserves, this could easily lead to financial catastrophe.

Dr. Fischer stressed the goal of the Blue Cross founders—to furnish hospital service to the community on a community rate and service benefit concept. They opposed the dollar indemnity concept, deductibles, coinsurance and merit rating. Competition from insurance companies, however, induced changes so that each of these once-abhorred features is now found somewhere in the Blue Cross family. More recently several plans have introduced a major medical type benefit, often known by other names, such as Extended Benefits. In order to handle national accounts, first a stock health insurance company, Health Service Incorporated, was formed and later an organization of the larger plans called the Blue Cross Association.

Insurance companies have gradually taken on some Blue Cross characteristics. They have provided benefits closer to full hospital costs and have accepted a benefit often considered uninsurable, namely, maternity. It may thus be said that Blue Cross and insurance are closer in current practices than formerly.

Dr. Fischer questioned whether insurance companies are adequately building the case for voluntary insurance when they neglect to develop the less attractive portions of the market such as the retired and other aged persons, the rural residents, the self-employed and the nonemployed. The community rate idea made it possible to continue coverage on the aged and even to offer it at a loss to persons not in a group. Lack of sufficient

company action will strengthen the hand of those who are eager to have the government take this initial step into the business through legislation for health care of the aged.

MR. J. E. MORRISON, in discussing section D, drew attention to the fact that a national hospitalization plan for Canada is virtually an accepted fact. Individual provinces are developing their own plans. If the provincial plan meets standards established by the Federal Government, approximately 50% of the cost is being met by federal funds with three important exceptions—care in mental and tuberculosis hospitals and costs of administration.

It is anticipated that the first federal funds will be advanced on July 1, 1958, to four or possibly five provincial plans. Ontario's plan will start January 1, 1959, and it is anticipated that the remaining provinces will follow as soon as plans can be established, with the possible exception of Quebec. Any province not joining the plan will, in effect, not only be giving up its share of federal grants but will also be paying for plans of the remaining provinces.

The most recently announced plan is for Manitoba and a starting date of July 1, 1958, is contemplated. This plan will provide standard ward care and regular hospital services to all citizens of Manitoba. Hospital service will be unlimited as to duration. Membership will be compulsory for all, with a premium tax to be paid by the individual of $4.10 per month for a married man and $2.05 for single individuals. Employers with five or more employees will be required to remit premiums monthly. The remainder of the population will pay semiannually with responsibility for collection placed on the municipalities which will be paid a commission of 3%. Individuals not registering and paying their premiums will be subject to fine.

An important aspect of the Manitoba plan in relation to other insurers is the enactment of legislation to eliminate duplication of coverage whether or not existing policies are on a cancelable or noncancelable basis. Effective July 1 for group and December 31, 1958, for individual, insurers will be precluded from making any payment for hospital services covered by the government plan. In addition, insurers will be required to refund unearned premiums as of these respective dates or provide equivalent additional benefits. Similar legislation will be enacted in Ontario and ultimately the effect will be to confine hospital coverage offered by private insurers to the excess over standard ward care. In the case of semiprivate coverage this excess amounts to only $2.50 per day in Manitoba. This raises the question as to whether it is economic to offer any hospital cover-

age over the standard ward level unless combined with other forms of coverage such as provided under a comprehensive plan.

The important question remaining is where this leads for the future. Many in Canada believe this is the first step on the road to state medicine. There is need for public discussion and decision on the issues involved and there is urgent need for all interested and informed groups of the community to join forces in the assessment of these issues.

PENSION PLANS

A. What activity on the part of consultants and insurance companies has been brought about by the various state laws regarding registration and regulation of employee welfare funds? What is anticipated with respect to federal legislation?

B. What methods have been devised for finding former employees who reach retirement age with vested pension credits?

C. What has been the reaction from employers and employees to "widows' pensions" as the death benefit under employer pension plans? What are the most common formulas for the amount of the widow's pension? What media have been devised for implementing a widow's pension plan?

D. To what extent do actuaries find themselves in competition on actuarial assumptions? Are there any practical measures which will reduce public confusion in this area?

E. How practical are multiple employer plans? Are they successful in lowering pension costs for the small employer? Can they be flexible enough to give a reasonable choice as to plan provisions?

MR. K. H. ROSS stated that the study of the six existing state laws and the recommendations of the NAIC has been one of the main activities on the part of consultants and insurance companies. Since laws in California, Connecticut and New York provide for coverage only of jointly administered funds, their applicability is limited. The Massachusetts law does not become effective until October 1, 1958; the Washington law exempts all funds where the trustee is already subject to state or federal examination, so that in effect the Wisconsin law dating from August 22, 1957 offers the most experience.

This law requires registration of all funds where the annual payment on account of Wisconsin employees is more than $2,000.00 per year, or where the fund covers 25 or more active employees in Wisconsin.

Consultants and companies can work with various authorities to encourage adoption of uniform requirements and statements required by these laws so as to minimize expense problems of funds operative in more than one state. In addition representatives of consultants and insurance companies have appeared before Federal legislative committees trying to point out the additional expense that may be incurred and the unnecessary features of blanket disclosure legislation.

MR. G. W. FITZHUGH of the Metropolitan added his warning against blanket disclosure laws. Such proposals as have been advanced do not appear to recognize the differences between welfare funds involving current expenditures of money on various benefits such as life insurance,

accident and health coverages and what might be loosely termed employee welfare, and the separate and distinct question of pension plans involving long-term accumulation of large reserves. In addition such legislation tends to confuse the issue of preventing thievery and the entirely separate matter of adequacy of reserves. Finally, the vast difference between cents-per-hour types of plan and fixed benefit plans does not seem to be understood. The latter type usually tends to be self-policing by the party footing the bill, usually the employer, and is not subject to diversion of funds to the detriment of beneficiaries.

MR. R. F. LINK outlined the Equitable's procedure for keeping track of employees with vested pension credits under either a conventional group annuity or a contributory deposit administration contract. At termination of employment, the employee's social security number and home address are secured and he receives a letter advising him of his rights under the contract, as well as a certificate with respect to his paid-up annuity and a change of address form.

The employee is contacted again after five years and again thereafter, if necessary. Further contact is made six years before the normal retirement date at which time he is sent election forms and a stamped self-addressed envelope. One year before the normal retirement date the employee receives a signature card.

If any of the above contacts fail, the employer is contacted for names of relatives and other pertinent information. At the normal retirement date the Claims Department takes over and treats a missing employee as they would any other missing beneficiary. Apparently to date the Equitable knows of no case in which it has failed to pay an annuity which fell due.

MR. R. J. MYERS outlined the procedure whereby the Social Security system, for a fee of $3.00, will forward a letter to an individual who is due an item of considerable value, in care of the last employer for whom he worked in covered employment or, if he was self-employed, directly to the address stated in his income tax return. Such addresses will not be disclosed, and, in cases involving private pension plans, this procedure is not available except when the individual is due an annuity or lump sum payment and has not applied for it within six months after it was first payable. Further, the Social Security Administration will furnish on a cost basis the worker's wage record or such parts of it as are needed to make benefit computations under private pension plans which involve some coordination with OASI. Again this service is available only upon retirement for actual computation of benefits.

MR. NORMAN STROM said that most self-administered plans contain a provision to the effect that a former employee may not apply for his

pension until 90 days before the date it is to commence. If he does not apply before a specified age, normally age 70, no pension is payable. Thus far, unions do not appear to have objected to the inclusion of such a provision.

Under such circumstances, no tracing of employees with vested pensions is necessary. The proper liability of the trust may be determined by a simple bookkeeping method. A fund is set up for vested employees to which the present value of deferred vested benefits and interest is credited. In the event a pension is not claimed, the original amount of vesting plus interest is debited to the fund.

MR. W. F. MARPLES remarked that in Great Britain widows' benefits have been in existence as long as pension plans. More recent development of these funds has come through an extension of trusteed pension plans. Perhaps this is so because, in Great Britain, contributions for pensions both for employees and for widows are considered deductible for tax purposes as being basically the same type of benefit.

The widow's benefit which includes a benefit paid to orphan children, usually until age 18 or 21, is ordinarily one half or one third of the pension accrued to the employee by reason of salary and service to his date of death. The same proportion of pension is paid to the widow on the death of a pensioner. Often a minimum period of service of 7 or 10 years is required to qualify. This produces a consistent benefit plan; it does provide somewhat inadequate benefits in the early years of service.

On the Continent, widows' and orphans' benefits are almost automatically included in pension benefit schedules and the emphasis upon them is greater than in Great Britain. There the widow's benefit is commonly taken as 50% to 60% of the total pension which would have accrued to the employee had he lived to his retirement age without change in salary.

In the United States the widespread use of group life insurance, coupled with the option of taking a joint and survivor type annuity in lieu of a straight life pension, has no doubt retarded the development of widows' and orphans' annuities. The joint and survivor option is not used as much as it might be, because of the sacrifice of income required from the employee. Mr. Marples stated that 5% of his firm's clients have a widow's benefit of some kind but only 1% have a widow's benefit payable upon death, whether in service or after retirement. The remaining 4% have a benefit payable on death in active service prior to actual retirement. After retirement the joint and survivor type of option is supposed to take care of the situation. There is no clear picture as to age or service requirements for these widows' benefits.

MR. G. N. WATSON noted that the Crown Life had developed a special form of group life policy to provide widows' pensions. Tax advantages and the elimination of the need for approval by the Internal Revenue Service make the group life form of coverage more satisfactory than a group pension benefit.

The policy usually provides a benefit payable to the widow of the employee in the form of a life income, ceasing on her death, and further makes one half the life income to which the wife would be entitled continue after her death until the youngest child of the employee attains age 21. Rates, therefore, depend upon the age of the employee, the age of the wife and the age of the youngest child.

The widow's pension benefit is usually 50% of the pension provided by the employer's pension plan at the employee's normal retirement date. Evidence of insurability is required in each case because of the large amounts developed, with, however, a minimum amount of group underwriting available to employees who cannot qualify. In determining underwriting limits, $1.00 of monthly life income is considered to be equal to $250.00 of coverage. The policy is written on groups of 10 lives or more.

MR. P. C. BASSETT pointed out that the need for widows' pensions exists today for the following reasons:

a) group life insurance is inadequate at the present levels,
b) there are large gaps in the Social Security benefits, and
c) joint and survivorship options under pension plans are too costly.

Employers often feel there is an inequity when an employee dies very close to retirement age and the widow receives only a nominal amount of group life insurance, whereas if the employee had survived a few days more the widow might have received a substantially greater benefit under the joint and survivorship option of a pension plan. Cost considerations are still largely responsible for the reluctance of most employers to adopt adequate widows' benefits, but the type of benefit formula most adopted is based not so much on the need of the employee but rather on what the employer can afford. These benefits are seldom insured by the large corporations, and this is probably due to the fact that most insurance companies do not offer the types of contracts necessary. Hence, widows' benefits are generally unfunded or, if funded, are done so through a trust. He thought this might serve as a warning to the insurance industry, since self-insuring of widows' benefits is not too much different from self-insuring group life benefits and other coverages as well.

MR. C. T. FOSTER reiterated the need for widows' pensions and pointed out that the three most common media for providing such bene-

fits are (1) an insurance company contract specifically designed for widows' pensions with premiums generally computed on a one year term basis; (2) a trusteed pension plan itself where benefits are payable in accordance with the benefit formula and (3) Group Life insurance contracts where the scale of benefits is devised to provide approximately the desired amount of widows' pension. Mr. Foster felt that providing widows' benefits through Group insurance rather than through the pension plan itself would probably be cheaper for many years in the case of most companies because the number of employees now at ages which would qualify them for the supplemental benefits is probably lower than it will be 10 or 20 years hence. The present term cost of the insurance benefit is thus lower than the cost of advance funding of widows' pensions under the pension plan, whether it be insured or trusteed.

MR. J. R. TAYLOR gave the Bankers Life Company's version of a widows' pension plan. It is issued as a group reversionary annuity covering married males and providing for pensions to widows who have been married at least one year prior to the death of the husband. Two types of pension formula are used, one being a flat percentage of the husband's pension earned to date under the retirement plan, while the other involves a graded percentage of the husband's final expected pension under the retirement plan.

MR. G. W. FITZHUGH pointed out that widows' benefits should very definitely be part of group life insurance programs and should not be added to pension plans, which in themselves are often underfunded. The temptation to add another supplementary benefit to a pension fund with apparently large reserves on the premise that it will cost very little is so obvious, yet so dangerous.

MR. F. W. HAMM remarked that the City of Detroit Retirement System does pay retirement benefits to surviving widows of employees who had chosen a joint and survivorship option. There are four options available, including the Straight Life Employee Annuity and City Pension, and these are:

Option 1—A Refund Employee Annuity and a Straight Life City Pension;
Option 2—A Joint and Last Survivor Annuity; and
Option 3—A Joint and One-Half Survivorship Annuity for a designated beneficiary.

There has been an increasing selection of Options 2 and 3, and a similar trend shown among disabled lives going on annuity benefit upon attainment of retirement age.

MR. R. M. PETERSON felt that employers under some plans are indirectly incurring the costs of widows' benefits even though there is no

direct recognition of the fact. This comes about by reason of relaxed restrictions on the election of the joint and survivor annuity option permitting such option to become effective upon retirement between 50 and 65 for seriously impaired lives and thus providing a substantial benefit in many cases at death before age 65. The pension cost figures will rarely reflect the added cost from such adverse mortality selection. The direct provision of widows' benefits is a sounder course.

MR. A. C. HOWELL discussed the competitive problems encountered by the John Hancock especially in the sale of deposit administration plans. They had for several years been using a fairly conservative set of actuarial assumptions with a requirement that the funding be at a rate no lower than 75% of the normal cost computed on the purchase rate assumptions.

At the same time, the proposed client would be shown the funding level at which the company would be willing to guarantee benefits, along with the lower funding rate based upon more elaborate experience factors. Apparently the budgeting problem has been the deciding feature in most cases.

More recent competitive situations seem to point out the use of varying withdrawal assumptions as one of the primary reasons for vast differences in figures. These assumptions are not always stated too clearly, if at all, on the proposals. He felt that a more detailed explanation of the funding assumptions and methods and their implications, and perhaps alternative calculations presented to clients, would be the best answer to these problems. He suggested that modern computing machinery provides us with a powerful tool to present the complicated facts of a pension proposal in a way the client will understand.

MR. C. T. FOSTER maintained that there is little competition on actuarial assumptions among competent consultants. Where competition on such assumptions does arise, usually the consultant is representing an employer corporation bargaining with the union, which may or may not have the services of a qualified actuary. In this set of circumstances, the employer is usually interested in establishing a sound fund with the past service liability being amortized over a reasonable period of time, whereas the union's interest is to secure the largest possible benefits for the given cents per hour and they are often willing to forget all about any amortization of the past service liability in return for a greater current benefit.

A second situation involves competition by insurance company representatives where different companies put out different proposals based upon varying assumptions.

Mr. Foster stated that there is definitely competition in the field of

funding methods, such as entry age normal, step rate, frozen initial liability, level percentage of payroll, etc. Here consultants' practices vary widely and many firms are no doubt addicted to one or more particular approaches.

It was suggested that public confusion might be reduced by consultants making an effort to explain to their clients the effect of using various assumptions and funding methods with, at the same time, the life insurance companies more carefully overseeing the activities of their local representatives in preparation of proposals.

MR. J. K. DYER, JR. pointed out the two principal areas in which actuaries find themselves competing on assumptions and methods. The first involves the cents-per-hour type of labor agreement where the union's actuary is under pressure to recommend the largest possible benefits out of funds available while the management's actuary must recognize only a conservative approach.

The second situation involves competition between banks and insurance companies and sometimes between different insurance companies; depending upon the assumptions and methods being used, the cost quotations naturally differ substantially at times.

Mr. Dyer suggested that avoidance of the cents-per-hour type of agreements would not only eliminate the actuaries' difficulties, but also would eliminate a lot of the much publicized financial and administrative abuses brought to light in recent investigations. On the other hand, the second type of competition is probably inherently desirable and should be preserved. However, the actuaries as well as the insurance companies involved should clearly state just what they are doing, and in this connection the forthcoming guides to professional conduct which the Society's Committee on Professional Conduct has developed may constitute an important step in seeing that such actions are taken.

DR. A. A. GROTH covered those areas where undesirable competition exists among actuaries as to assumptions and funding methods. Insurance company representatives as well as consultants have been guilty of presenting figures to clients without giving adequate information and explanation as to the basis of the quotations. His own firm tries to give an employer client somewhat of a primer on pension plans to enable him to arrive at his own conclusions. He suggested that more education of, and information to, clients on the part of consultants as well as insurance companies might well eliminate some unsound practices.

MR. F. D. CUBELLO said that the Prudential has had favorable experience with group pension contracts issued to associations of employers. Two basic elements are important to satisfactory operation. There should

be a unifying interest among the employers, such as conducting a similar business in the same geographical area, and a strong central agency to coordinate and administer the whole plan.

Although the experience of all employers is combined for dividend purposes, the Prudential maintains separate accounting for each employer. Significant savings are realized through decreased acquisition expenses and the use of uniform certificates, booklets, administration manuals, etc.

For practical purposes, there must be a reasonable degree of standardization, but individual employers are given a limited choice as to benefit formulas, eligibility provisions, etc.

MR. J. M. ELKINS listed the advantages of a multi-employer pension plan for certain types of industry. These are uniform contributions and uniform benefits among competing employers in industries where labor costs must be tightly watched; the coverage of employees in small units who could not otherwise obtain such coverage; a reduction in administrative and consultant costs; and finally, continuity of coverage for employees who shift from job to job within the same industry. Such industrywide plans are the only way to avoid the evils of a multiplicity of plans in areas characterized by considerable labor mobility, excessive benefits arising from more than one plan, or inadequate benefits resulting from lack of qualification under any one plan.

MR. AUBREY WHITE remarked that small employers naturally seek multiple-employer groupings in order to increase their bargaining power. Many of them in turn choose corporate trustees in order to avoid occasional inflexibilities.

Any of the multiple-employer groups must have some strong binding force other than the desire for pensions, as well as some central administrative authority capable of representing them. This is the old axiom followed by every group underwriter.

Mr. White pointed out the example of a bank offering a trusteed pension fund to its correspondent banks as well as labor union plans covering many small employers. The common interests of each group are apparent. He also stated that while these multiple-employer plans with corporate trustees do offer a great deal of flexibility, some degree of uniformity is necessary in order to prevent unreasonable cost and fragmentation of the group.

TRANSACTIONS OF SOCIETY OF ACTUARIES
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THE IMPACT OF INFLATION

A. Recent International Congress papers indicate there is a move in Europe toward government pensions protected against a decline in purchasing power. Is such an arrangement feasible? Are any of our governmental bodies considering similar arrangements?
B. What steps are life insurance companies taking to protect policyholders and annuitants against loss in the purchasing power of the dollar?
C. What do studies in functional costs over a period of years show about the trend in the expenses connected with the simpler routine tasks such as policy underwriting, premium accounting, premium billing, etc.?

MR. G. N. CALVERT spoke on the feasibility of protecting pensions against a decline in purchasing power after retirement. He felt that if employers do not provide this sort of protection, social security will tend to extend in this direction and suggested that we, as actuaries, should be concerned with sound design and safety features or investment limitations on a plan of this kind.

Mr. Calvert's firm, Alexander and Alexander, Inc., has a plan which is already in use. It is based on a 24 month moving average of the Consumer Price Index, which provides a compromise between sensitivity and smoothness. A useful safety feature is to provide for an arbitrary limit such as a maximum of 5% change within any 6 months. Further, frequency of change can be limited by providing no change until a 5% or 10% movement has occurred, and in any case not more than once in 6 months.

A final average earnings type of basic formula need not be used; a career average formula can be employed in a cost-of-living plan with the accrued units adjusted as time passes. He believed that a career average plan with cost-of-living adjustment is more stable in financing than a final average plan without cost-of-living adjustment.

Mr. Calvert showed a chart of the Consumer Price Index from 1900 to date superimposed on a curve based on $2\frac{1}{4}\%$ compound interest. The curve based on $2\frac{1}{4}\%$ interest was a good representation of the past, although not necessarily a good forecast of the future. There were heavy departures from the compound interest curve after World War I and into the depression.

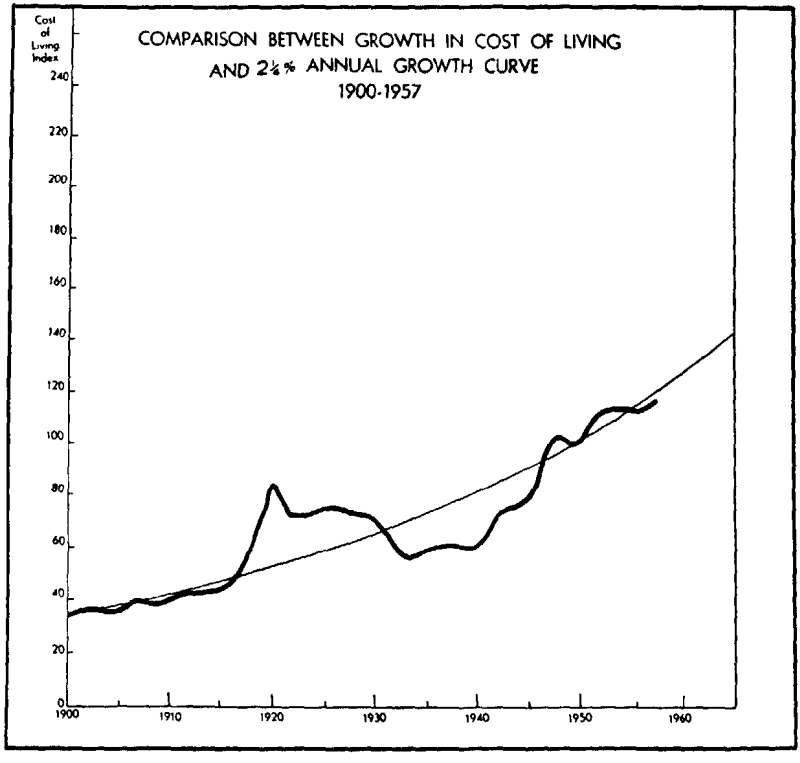
Inflation is essentially the reverse of compound interest. The amount of a dollar a year hence with 2% interest is a dollar and two cents. The purchasing power of a dollar a year from now is $1 divided by 1.02 if the

inflation rate is 2 per cent, and \$1.02 will have to be paid instead of \$1, if it is to provide the same amount as \$1 due today. If the two rates are the same, the effect of inflation exactly cancels out the effect of interest and the value of a pension becomes e_x instead of a_x.

To provide a maintained purchasing power in a pension fund we can limit ourselves to taking credit for only the difference between the interest rate and the inflation rate allowed for. Thus, if we assume a 3% interest and a 2% inflation rate, we get a good approximation to the cost of funding by using 1% interest.

Mr. Calvert showed a chart which had Standard and Poor's Index of Industrial Stocks and curves based on 3% compound interest and another chart which had the Consumer Price Index and curves based on 3% compound interest. He suggested that the $2\frac{1}{4}$% curve shown previously gave a better fit and that the Consumer Price Index curve appeared, over the past 50 years, to have moved somewhat more slowly than the 3% curve.

CHART I



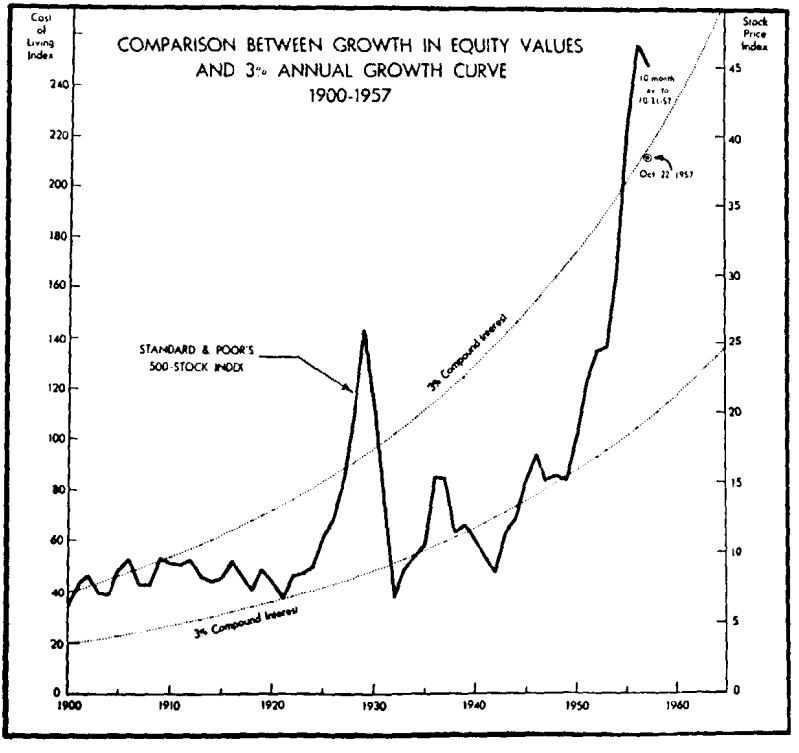
Based on these charts, Mr. Calvert felt that equity investments for a pension fund tend to help meet the cost of inflation, but higher costs can be partly neutralized by higher interest as well as by capital growth. A cost-of-living plan works best with heavy funding. It is no use having unfunded liabilities earning interest at the valuation rate because the unfunded liability is vulnerable to inflation.

To hold down total cost, we can use limitations on entry age, changes in retirement age arrangements, or we can trim the basic formula. A soundly funded plan of this kind can be more permanent than most plans because it is less subject to future change in the formula.

Three comparisons were given between the equity unit plan and this type of plan.

1. In this type of plan, differences between the Consumer Price Index and equity values are transferred from retired employees to the fund.
2. The barrier between the bond and equity sections of the fund is removed

CHART II

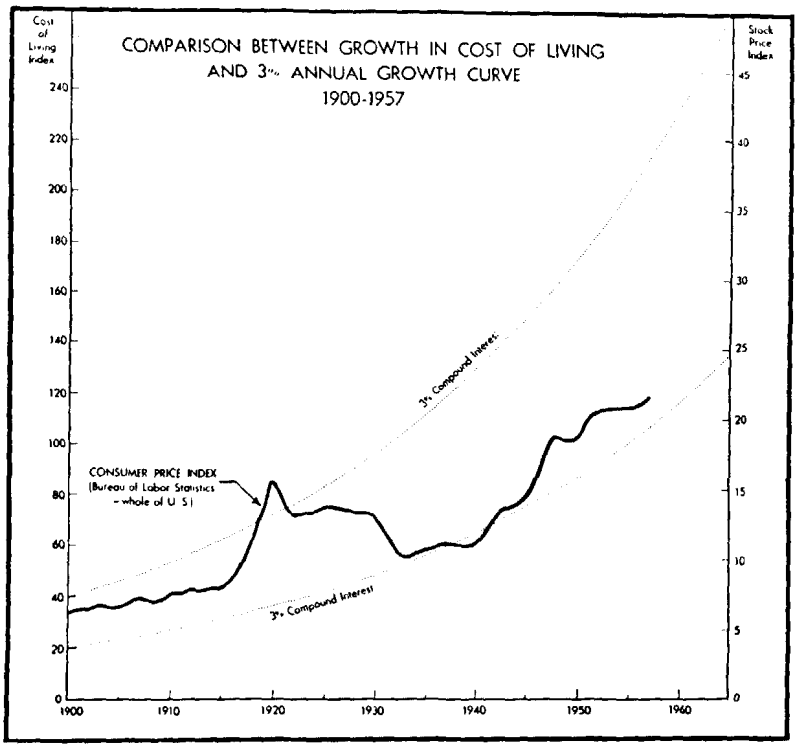


so that trustees can use investment judgment. This removes a weakness of the equity unit plus fixed dollar plans.

3. The employer underwrites the investment performance of the fund over the long term. The fund itself absorbs short term fluctuations.

The plan can work without equities; the added cost is represented by the drop in interest rate. Insurance companies have indicated a willingness to use this plan with split funding.

CHART III



MR. E. A. DOUGHERTY said that at the International Congress he met an Israeli actuary who told him about an insurance plan protecting purchasing power by incorporating a cost of living index in policies when issued. After issue, all payments by the company or to the company are based on the government index or the policy index, whichever is higher. This has been done by 11 companies in cooperation with the government. The funds behind these policies are invested in bonds issued by the Israel Electric Company which is controlled by the government.

MR. M. A. LINTON remarked that Mr. Junnila of the Mutual Life Insurance Company of Finland reported an index rise of 86% from January 1948 to October 1957. Mr. Junnila's company issues a decreasing term insurance plan renewable to age 65 with amounts scaled down to what the premiums will buy. Both premiums and face amounts are adjusted periodically according to a cost of living index. In 1956, 44% of all new insurance in Finland was on that plan. In 1948 they issued a permanent plan with a 3-year adjustment period. When they found this period too short, they adopted a plan with full adjustment during the first 3 years and 50% adjustment thereafter. To invest the resulting funds, they make loans based on adjusting periodically the remaining principal by 50% of the increase in the index. The adjustments result in changes in the periodical repayments. They do not require lump sum payments. They attract borrowers on this basis with a basic interest rate of 7½% compared with 8% on regular loans.

MR. R. J. MYERS said that the arrangement mentioned in section A is technically feasible for social security but that there are political and economic problems to consider. The adjustments can be based on changes in the cost of living or in the general earnings level. There is a question whether adjustment should be made only for past earnings or also for benefits in force according to future experience. Sweden, Denmark, Finland and Israel have flat-benefit systems with adjustments based on an index. On the other hand, in wage-related programs, such as the new West German system, adjustments are made to bring past wages up to date to take into account changes in earnings level before retirement. Great Britain has a flat-benefit system, but legislation is being considered following somewhat the West German plan and in addition with automatic adjustment of benefits in course of payment. Chile has a final earnings basis for computing benefits, which are adjusted each year after retirement; this country has had a serious inflation and the adjustments have recently been suspended. In Brazil, minimum benefits are adjusted each year as a certain proportion of the legally prescribed minimum wage.

In the United States we have *ad hoc* adjustments; a person who retired in 1940 now receives, in constant purchasing power, about 10% to 15% more than he did in 1940. This increase is less than the equivalent rise in the real wage level. An automatic cost of living adjustment basis does not appear imminent. Although an automatic provision seems attractive at first, it is not desirable. It can augment inflation as apparently has been the case in Chile. Mr. Myers believed it was better to have increases considered by the legislative authorities who can vary or add benefits as needed rather than to have existing benefits automatically increased. For

example, the lump-sum death payments under OASI have been de-emphasized by not being increased.

Finally, it would appear that members of Congress have little enthusiasm for automatic adjustments of benefits payable to large numbers of individuals, as contrasted with the prevailing basis of placing themselves on record as voting for such rises.

MR. J. E. MATZ observed that we are not now prepared to accept inflation as a permanent part of our way of life. Rather, the idea of segregating pension assets for purposes of allocating investment returns and asset gains is based on two facts which seem increasingly to dominate the pension market. First is the concern on the part of the pension plan purchasers with possible upward movement in pension levels in the future, with the accompanying desire to use common stock investments as a hedge against that upward movement; and second is the shift toward pension plan types in which the purchaser is not anxious to have the insurance company undertake the guarantee of eventual payment of a stated dollar pension. Whatever the reasons for these trends, they constitute the significant features of the market. Although insurance companies traditionally give guarantees, they must be able to accommodate the market as it actually exists. The level of benefit for an individual must be guaranteed by his employer.

It is not suggested that insurance companies abandon all giving of guarantees under pension plans. Guaranteed accounts in a segregated fund would not be based wholly on common stocks. Even direct-rated cases will usually include some guaranteed dollar benefits. For direct-rated funds where liability is limited to the asset value of such funds, Mr. Matz felt that the substantially larger investment in common stocks can and should be made.

MR. W. M. ANDERSON confined his remarks to section A. In many European countries a change in the price index is a problem of great magnitude, but in Canada the increase in the price index is only slightly beyond the index of per capita consumer spending. In a needs test type of benefit the difference between budgeted needs and the resources of the individual is a built-in factor that accounts for changes in the real standard of living. However, there is a bad public reaction to a needs test applying to a great many people, and a needs test is expensive to administer. Canada has several means test programs under which it would be possible to have allowable income altered frequently by regulation rather than by a statutory formula. There is also a flat-benefit type of program in Canada which would offer three difficulties to an attempt to build in an automatic adjustment:

1. The total of benefits paid to the beneficiary population together with their other resources approximates the spending level of the rest of the country. This total should not go beyond the national level, and there is danger of going too high with an automatic program. Every change in flat benefits must be carefully examined.
2. Any built-in adjustment factor gives a clear implication of a guarantee for the future, but this is a pay-as-you-go system and is not guaranteed.
3. For political reasons, the legislators want the privilege of changing benefit levels.

For graded benefit programs, which are not now represented in Canada, there are the same problems, but also there may be a change in the distribution of other resources in the beneficiary population. The tilt of the graded benefit scale might need a change, as well as the level of the benefit scale. Any built-in factor might guarantee a bigger subsidy to larger income pensioners, which is politically undesirable. This applies more particularly when benefit ceilings are raised. It is folly to promise in advance to lift ceilings because this gives a windfall to the part of the covered population which needs it least. Therefore, it is not sound to build in an automatic increase in ceiling benefits. Mr. Anderson repeated his belief that the best approach is a flat benefit combined with a supplementary needs test plan. A significant increase in the number of persons coming under the needs test program then signals the necessity of considering an increase in the flat benefit.

MR. D. M. ELLIS, in opening section C, said that Canada Life has made a detailed functional analysis of expenses every three years. The

TABLE 1

Function	Index Numbers			
	1947	1950	1953	1956
Premium collection cost per collection	100	95	95	94
Death claim cost per claim incurred	100	80	84	91
Cash surrender cost per policy surrendered	100	55	53	58
Annuity payment cost per payment	100	70	70	69
Policy issue per policy issued	100	121	115	118
Underwriting per application submitted	100	100	142	165

cost of routine functions has decreased but the cost of more specialized functions such as underwriting has increased. Taking 1947 as a base, Table 1 shows the relative costs for recent years. During this period there has been a doubling of Ordinary volume and there have been many improvements in

methods. Mr. Ellis felt that even if inflation continues to the same degree over the next 10 years, there is a good possibility of avoiding an increase in unit costs if, together with increased volume, there are further improvements in systems. In the case of his company, he believes a conversion to electronic methods of data processing is essential since the area for improvement with mechanical methods is now limited.

MR. MANUEL GELLES said that unit costs for New York Life for the period 1953 to 1957 have decreased about 5% for policy changes, claim procedures and surrenders and have increased 5% to 10% for issue, underwriting and premium collection. He suggested that new methods should, wherever possible, be capable of absorbing increased work load with a minimum increase in costs.

MR. C. F. B. RICHARDSON reported that Mutual of New York has been conducting functional cost studies annually since 1944. Underwriting costs for nonmedical business have not changed appreciably, but for medical business the costs have increased by over 50% on account of increases in the costs of medical fees and inspection reports. Policy issue costs have actually decreased during the period by about 20% largely because of an increase in the volume of business, which has reduced overhead costs. The renewal collection function shows an increase in costs of about 15% undoubtedly due to the effect of inflation on salary costs. There has not been much change in the cost of such functions as beneficiary changes, preparation for modes of settlement and cash surrenders. Changes in procedure of such functions obscure the effect of inflationary increases in salary cost and the net result shows rather modest changes. The cost of dividend operations appears to have increased rather substantially but in this connection it is important to note that the total cost depends on the distribution of elections under the various options. He found that the premium reduction option is the cheapest, dividend additions are the next cheapest and the deposit and cash dividend options are the most expensive to handle. "Indirect expenses" comprise such items as the service department, including mailing, supply and purchasing, personnel division, home office lunches, security plans for employees, employee welfare activities, home office telephone service and the unallocated portion of home office postage. In the aggregate, these indirect expenses are expressed as a percentage of all allocated functional costs, and they have increased by only 10% from 1944 to 1956. "General overhead" includes such items as the unallocated portion of salaries of executive officers and the law department, the planning division, the advertising department (excluding sales promotion), association dues, employee training programs and various other unallocable items. These expenses

also are expressed as a percentage of all allocated costs and this group of expenses appears to have increased by about 15%.

If the substantial increase that has taken place in the average size of policy both for new business and for business in force is taken into account, it appears that increases in operating costs have not yet affected the net cost of insurance.

MR. M. A. ELLIS said that the best answer to the question is economic rather than actuarial, maintaining that it is essential to stop either creeping or galloping inflation at its source as the only way to really protect policyholders from loss of purchasing power. Paying tribute to anti-inflation efforts of the Institute of Life Insurance, he recommended that we explain to our customers the dangers of inflation and enlist them as allies in combating this cruel enemy of thrifty people. He stressed that efforts to insulate portions of the economy from inflation, as by variable annuities or escalator clauses, only make inflation worse for others including policyholders with fixed dollar contracts. Even common stocks may not protect their holders against inflation. He summarized that we must fight inflation with every weapon at our command for the protection of policyholders, annuitants and our country in general. The way to stop a forest fire is not to let it get started.

MR. WILLIAM SIMPSON reported that Acacia has experienced a substantial increase in unit costs since 1941. However, since the average

TABLE 2

Function	Index Numbers			
	1941	1946	1951	1956
Lay underwriting per policy issued	100	168	240	294
Policy issue per policy issued	100	155	197	271
Premium collection per policy in force	100	175	179	250
Death claim cost per claim handled	100	86	137	139
Combined new business costs per policy issued	100	108	183	242
Combined old business costs per policy in force	100	138	159	202
Lay underwriting per $1,000 paid for	100	105	126	117
Policy issue per $1,000 paid for	100	97	103	108
Combined new business costs per $1,000 paid for	100	68	95	97
Premium collection per $1,000 in force	100	136	109	136
Death claim cost per $1,000 in force	100	69	87	78
Combined old business costs per $1,000 in force	100	112	96	113

size policy has increased during the period, the over-all administrative expense per $1,000 of insurance has increased only 5% since 1941. Actually, the new business cost per $1,000 of insurance paid for has decreased over the period since 1941 and in 1956 was only 97% of the 1941 figure. Taking 1941 as a base, Table 2 shows the relative costs for recent years.

MR. M. L. GOLD thought that if government salaries, bonds and other items are tied to the cost of living index there would be an incentive to keep the index level by use of subsidies. Also, there might be an incentive to alter the index by introduction of bias.

MR. S. J. KINGSTON warned that the existence of varying benefits might weaken the fight against inflation. He wondered whether the use of the Consumer Price Index was mutual and legal. He remarked that the index might not be representative of what an annuitant buys. He asked whether the government would be willing to alter the index if insured annuities carried the burden. He felt also that fixed settlement options might still be selected in preference to adjusted options because of the higher starting amounts.