TRANSACTIONS OF SOCIETY OF ACTUARIES
1968 VOL. 20 PT. 2 NO. 57

VARIABLE ANNUITIES AND MUTUAL FUNDS

1. Compare variable annuities and mutual funds from the viewpoint of both the issuing company and the contractholder, with respect to
   a) Taxes.
   b) Profits.
   c) Mortality and expense risks.
   d) Laws and government regulations.
2. What other equity-based products could life companies offer?
3. What combinations of life insurance and equity funds are being made for package sales?
4. What developments have occurred in equity products offered by life companies in Canada and Europe?

MR. A. CHARLES HOWELL: So that you can take into account the extent to which my remarks may be colored by my own personal experience and biases, let me first state my own company's posture with respect to variable annuities and mutual funds.

Since July of 1957, when Massachusetts legislation permitting life insurance companies to write group variable annuities along with other life insurance products became effective, we have had a group variable annuity product for sale for qualified pension plans.

To fund these plans, we utilized a previously established, separate account, pooled common stock fund and relied on the provisions of SEC Ruling 3(c)(3) for exemptions for the current acts.

Our company has also formed two organizations which will provide mutual fund facilities under the John Hancock name—a subsidiary investment company and a distributing company. Also, as indicated in our opening discussion this morning, because of these events, our company is likewise in a position of being able to call itself a holding company, together with all that that implies.

It is also our present intent to market variable annuities when Massachusetts laws permit us to do so without formation of a separate company.

I would like to mention a few articles which I found quite in point on the subject of our discussion. First of all, there are Loren Logan's informative remarks at Philadelphia. I am sure you will have a chance to read those in the *Transactions*. They are very pertinent.

Second, there is Don Grubbs's book, coauthored with George Johnson, on the variable annuity.

The third, and this is a paper I am going to refer to quite freely, is Professor Harold McClelland's paper in the *Journal of Insurance* (June, 1962) entitled "Do Variable Annuities Have a Tax Advantage?"

Finally, there is a recent paper delivered by Robert Dineen at the Zone Five meeting of the NAIC, which as yet does not have a title. It is about the evolution of variable annuity regulations.

I found all these sources in agreement in one respect—to compare properly the operations of variable annuities and mutual funds, we would have to analyze the differing impacts of a very long list of variables. Because of time limits, I shall restrict my own comments to only the most important of these. Perhaps in the subsequent discussion we can take up some of the less familiar aspects.

The first topic I would like to cover is the differential tax impact on mutual funds and variable annuities. I subdivided the taxes into those assessed against the customer and the buyer and those assessed against the issuing company. The first of these has to do with taxes and their impact on the customer.

Here I rely very heavily on Professor McClelland's paper. In his analysis, McClelland found it helpful to distinguish between completed retirement plans and uncompleted retirement plans. Within each of these subgroups he showed the most important variables—first, the tax brackets of the individual; second, the level at which he contributes to the savings plan; third, how long that plan remains in effect and whether, after retirement, he has supplemental earnings.

In attempting to make the numerical comparisons of these differences between the variable annuity and the mutual fund, numerous other assumptions must, of course, be made.

Among the most important of these are the rate and timing of the realization of interest and dividend income and capital gains. Secondary considerations are the tax bracket, the marital status, the number of children, and whether or not a joint return is filed. Therefore, it is a complex topic, and we cannot cover very much of it today other than to give a broad outline of results.

Before we summarize McClelland's conclusions, it will be helpful to mention the reason why there may be a tax difference between the variable annuity and mutual fund approaches.

Mutual fund shareholders are taxed on the theory that the mutual fund is a conduit through which dividends and other investment income flow from the corporate security issuer to the mutual fund shareholder. On this theory, during the accumulation period, the mutual fund shareholder is taxed on dividend income that is passed on to him at his then ordinary income tax rate and on capital gains as realized at capital gains rates. Of course, you can see that there would be quite a difference in the results, depending upon the assumptions that one makes about what the rate of capital gains and of dividend income will be.

If the shareholder surrenders his shares—whether before or after retirement—he would be taxed at capital gains rates on the excess of the then value of his shares over his investment in those shares.

On the other hand, the holder of a variable annuity is taxed in the same manner as the holder of an ordinary annuity. This means that, if the contract is not surrendered before maturity, the annuitant pays no tax at all during the accumulation period. After retirement, he is taxed on his annuity payments less a deduction based on his investment in the contract. This investment in the contract is the amount he sets aside to buy the annuity—on which he had previously paid a tax.

The variable annuitant who surrenders his contract is taxed at ordinary income rates on the excess of the surrender value of his contract over his investment in the contract. We should note here that this tax situation may not always be as straightforward as it sounds. There may be income-averaging opportunities.

To come to the numerical conclusions, McClelland assumed an annual rate of dividend payout of 5 per cent and an annual rate of capital appreciation of 3 per cent, with no realization of capital gains during the accumulation period. It was interesting to observe that when some computations for Loren Logan at Philadelphia were made, the reverse was assumed—that dividend income would be at 3 per cent and capital gains at 5 per cent.

McClelland sets forth a number of conclusions, but I will only repeat a few. In each case, to simplify the discussion, I will be talking about the ratio of what the mutual fund policyholder or shareholder receives in comparison with what the variable annuitant would have received.

First of all, at maturity, that is, age sixty-five, McClelland was assuming in this case that he had an individual who was married, without children, aged thirty-five at the time he started his program and sixty-five at retirement. He found that the variable annuitant had an advantage in the amount of accumulation standing to his credit at age sixty-five and that the ratio of the mutual fund accumulation to the variable annuity varied from 93 per cent to 44 per cent, depending primarily on the tax brackets of the individual. I will come to a reservation I have about the conclusion of that analysis shortly.

Looking beyond age sixty-five, he assumed in another comparison that the mutual fund shares were liquidated over the individual's expected lifetime. He did this by assuming that the accumulation at age sixty-five was used to buy a single-premium variable annuity at that age. The difference between the benefits of the mutual fund approach and the variable annuity approach was greatly narrowed in this process.

I think it is clear why this happened. It goes back to the way in which the tax works. If at retirement the individual had earnings in addition to those from his annuity or mutual fund, the differential would be still further narrowed. To take an extreme example, if an individual in the 91 per cent tax bracket had additional income of 25 per cent, the variable annuity ratio for a man who is paying $500 a year into his retirement plan would rise from 55 per cent to 94 per cent. At the $2,500 level it rose from 94 per cent to 112 per cent.

In the case of uncompleted retirement plans, however, the situation is reversed, especially if the holding period is relatively short. McClelland found that the mutual fund shares would have approximately a 10 per cent tax advantage over the variable annuity if liquidation occurs at the end of five years and a 5 per cent advantage if liquidation occurs at the end of ten years. Again, analysis of the tax assumptions will show the reason why that is so.

In summary, McClelland concluded that the variable annuity is designed for and taxed as a retirement device and that for this purpose it usually provides a better vehicle than does the mutual fund. Except in isolated instances, individuals desiring an investment vehicle would probably choose a mutual fund. In practice, he concluded that most individuals probably have mixed objectives—both retirement and investment. The advantages would lie with one plan or another, depending on the relative importance the individual gives to retirement versus investment, his income status, and the amount of money involved.

As for the question of taxes against the insurer himself, premium taxes are a clear disadvantage of variable annuities, and, as you all know, they can amount to about 2 per cent of the initial payment. However, under completed retirement plans, this disadvantage of the variable annuity is small when compared to the advantage of the preretirement tax-free accumulation. Under uncompleted plans, particularly those of relatively short duration, premium taxes are understandably of greater importance.

Other taxes on the issuer may be analyzed a little differently. First of all, under both the mutual fund and variable annuity approach, all regular investment income which is passed on to the customer is tax-exempt to the issuer. Second, with respect to realized capital gains, mutual funds have an advantage. There is normally no tax on the issuer, and the shareholder pays the smaller of 25 per cent or his personal tax rates on half the gain. However, for a nonqualified variable annuity situation, the insurance company is subject to a flat 25 per cent charge on realized capital gains, and the customer, in the long run, must pay an additional tax at ordinary income rates on the remainder passed on to him.

With respect to taxes on operating gains, and there must be some under both mutual and variable annuity funds, the variable annuity company will frequently have the advantage. If the company is not in Phase II, there would be no tax at all. If it is in Phase II, the tax would be at essentially a rate of 25 per cent.

On the same amount of gain, the mutual fund would normally be taxed at the customary corporate rate of 48 per cent. This leads us into a consideration of the sources of profit which might lead to such gains under the mutual fund and variable annuity plans.

We can analyze these in three customary actuarial categories of loading, investment, and mortality.

With respect to loading, the customary or frequent mutual fund loading is in the neighborhood of 8.5–9 per cent. Of this, approximately 3 per cent goes to the principal underwriter (used in its investment sense), 4 per cent to operating expense, and the balance is passed on to the broker-dealer. Of this latter amount, 1.5 per cent goes to the supervisor or the selling agent.

Under these circumstances (and I think this is found in practice by the SEC), there is virtually no opportunity for the mutual fund to profit from loading. If the SEC is successful in its attempts to secure a reduction of the maximum loads on mutual funds to something like 5 per cent, profits, if any, will certainly vanish.

Under the variable annuity contract there may be slightly greater opportunities for profit, even though the loading patterns are pretty much the same. To the extent that margins are built in for future administrative costs, for shareholder dividends or, in a mutual company, for policyowner participation, this tends to be true. However, as competition between variable annuities and mutual funds grows, there will be strong pressures to share any such gains with contractholders. This will be done either through dividends or through loading reductions. The principal source of profit, however, is the investment advisory fees, both for the mutual fund and for the annuity.

In the mutual fund, for example, a direct loading or charge for investment services is $\frac{1}{2}$ per cent of the value of the fund each year, and for some of the very large funds the actual expenses have been running about 0.1 per cent. This is a big source of profit.

Issuers of variable annuities have investment fees frequently in excess of 1 per cent, with only a few being as small as $\frac{1}{2}$ per cent. It should be recognized, of course, that sometimes these fees are intended to cover mortality and expense guarantee, but in other instances these are separate charges. In at least one instance, the total charges for investment advice and guarantee amount to $1\frac{1}{2}$ per cent.

On the surface then, investment advisory charges appear to offer more opportunity for profit under variable annuities than under mutual funds.

There are no opportunities for mortality profit in the mutual fund area; in the variable annuity there may be such opportunities. Companies may be expected to be cautious in selecting the mortality tables underlying the variable annuity rates. Conservatism in these tables should, at least for a time, provide a source of profit. In addition, the specific mortality and expense charges of $\frac{1}{2}$ per cent or 1 per cent of assets made each year would be the source of additional profits. The extent of these profits will, of course, depend upon the degree of risk presented by these guarantees, which we now should at least consider for a moment.

First, with regard to the mortality risk, the basis frequently employed by companies entering the field today appears to be the progressive annuity table with a band system which provides greater margin for mortality improvement for recent generations of lives than for older generations. In adopting these, the basic assumption seems to have been that, although mortality has not improved as much in recent years as scaled in the future, it probably will improve more rapidly.

With respect to risk involved, it is clear that a greater degree of conservatism should be exercised for variable annuity contracts than for other forms of insurance contracts; first, because investment gains are not available to offset unfavorable mortality except to the extent specified in the contract, and, second, because a large increase in stock values could greatly increase the impact of a larger-than-expected reduction in future mortality levels.

With respect to the expense risk, somewhat similar observations can be made. Loading will normally be set at a level sufficient to cover not only commissions but also administrative expenses, and margins will be included to cover possible increases in future administrative costs. To the extent that these allowances are conservative, profits may emerge. Further, if there are losses, they can be recovered to some extent through additional charges.

It is commonly thought that mutual funds have little in the way of expense risk and no guarantees about the level of management fees. However, in practice, we find that many management contracts do in fact have a current statement of maximum limit on management fees. Recently, shareholders of mutual funds have been much more active in trying to hold down the management fee charges. If the expenses did get out of line, it may be that the shareholders would prevent mutual funds from increasing their fees to their management firms. Therefore, there may be implicit risk to mutual funds which is not fully recognized as yet.

In the area of regulation, it is generally agreed that mutual funds face far fewer regulatory differences and difficulties than do variable annuity companies. Most people who have worked in the variable annuity field will say "Amen" to that.

It would be helpful to review the reasons for these differences and difficulties and some recent developments which may change the picture.

First, the reason mutual funds do not have too much difficulty is that they have been regulated for the most part by the SEC; the Commission has been performing that function for several decades, and their ground rules are quite familiar. However, it is not as well known that they also must satisfy the conditions imposed by state Blue Sky laws.

Variable annuity companies operate in a much cloudier climate, because the product itself is a blend of insurance and investment offerings which must contend, therefore, with a blend of regulatory organizations. These sometimes do conflict in their objectives with the SEC, the fifty state insurance departments, and about twenty state Blue Sky departments. If a qualified pension plan is involved, the Internal Revenue Service may turn this triple regulation into a quadruple regulation. As an example of the chaos that can result, a review of the recent school board decisions by the IRS is both instructive and frightening. School board plans designed to provide flexibility required by the SEC were rejected by the IRS because of that flexibility. Later on, the IRS took a look at this flexibility and found that the very flexibility was an impairment to the qualification status. Finally, the SEC and the IRS came to a meeting of minds, although regulations have not yet been promulgated in final form.

Maybe this confrontation between the SEC and the IRS will help achieve a healthy reconciliation of regulatory objectives. For the moment, however, the effect is to slow down greatly the development of a salable variable annuity product.

A similar type of thing is going on in the state. There is currently before the Industry Committee a model variable annuity regulation law which seems to be making a fair amount of progress. In the course of developing this model regulation, a lot of our troubles with the state department will undoubtedly be reduced.

MR. DONALD S. GRUBBS, JR.: The next item on the agenda has to do with what other equity-based products life insurance companies can offer. When we say "other," we mean other than mutual funds and variable annuities and other than the combination of insurance and equity products that will be discussed a little later.

This leaves variable life insurance. Variable life insurance is life insurance in which the death benefit and the maturity value, in the case of an endowment policy, vary with the market value of the assets funding the insurance or with the cost of living. Extending the definition somewhat, variable life insurance may be thought of as any plan containing an insurance element in which part or all of the death benefit varies.

Consider a life insurance policy in which the reserves are invested partly in common stocks and partly in fixed-dollar investments of bonds and mortgages. Favorable investment experience is reflected in dividends which are applied to purchase additional paid-up insurance. Thus the amount of death benefit does vary, based upon investment experience.

You will recognize this as the kind of policy which most mutual life insurance companies have been issuing for the last one hundred years. However, the portion of the assets of the company invested in common stocks is very small, so that the investment experience has been based primarily on fixed-dollar investments. The investment experience has greatly affected the benefits under the policies, as witnessed by the falling dividend scales in the 1930's and early 1940's and the rising dividend scales in the last twenty years. The total product, of course, would be more equity-oriented if a higher percentage of the insurance company's assets were invested in common stocks.

Some people have been advocating increasing the legal limitation upon investment in common stock with appropriate safeguards through modification of the Mandatory Securities Valuation Reserve. However, it must be pointed out that most life insurance companies are not now investing in common stocks up to the legal limit, although some of them are moving slowly in that direction.

In the process I have described, the dividends include investment income but generally do not take account of capital gains and losses. Most companies feel that it would be undesirable to have substantial fluctuations in the dividend scale, resulting from appreciation and depreciation of market values. This could be remedied through a process of gradually recognizing appreciation through one of the methods commonly used for writing up assets under pension funds, which could almost eliminate any negative fluctuation.

Why is there a need for variable life insurance? In some instances, life insurance is purchased to meet fixed-dollar obligations, such as paying off a mortgage, but most often it is purchased to help a widow raise children, to meet future emergency needs for cash, or to accumulate savings for the policyholder—perhaps a life annuity. In all these instances, the dollars furnished by the life insurance proceeds are valueless except as a medium of exchange. The dollars must be used to purchase food and clothing, to pay the rent and doctor bills. The cost of these foods and services is variable, depending upon the purchasing power of the dollar.

The use of settlement options may partially or wholly offset the problem of inflation in the needs for death benefits. If the proceeds of insurance are used to provide a monthly income for life for the widow, either using the settlement options of the policy or purchasing an annuity, the amount of monthly income provided increases with the age of the widow at death.

The guaranteed monthly income for life for each thousand of insurance under policies currently issued by one company would be $3.11 at age twenty-five and $5.72 at age sixty-five. You can see that this is an increase of 84 per cent over the forty-year period.

If the insured is thinking of providing an income for his family only while the children are small, then the need for insurance will tend to decrease as the children grow older, because the period of years for which an income is needed would decrease. This may offset the rising prices of inflation. Of course, this decrease does not occur when the family has more children at age zero. If the standard of living of the family rises, it would require more money to maintain the higher standard of living in the event of the death of the breadwinner.

Other purchasers of variable life insurance, or prospective purchasers, would be interested not from the viewpoint of keeping up with the cost of living but from the viewpoint of providing the largest possible death benefit together with the largest possible accumulation of assets prior to death. Some of these will be people who are primarily interested in building up their savings and would purchase common stocks or mutual funds to accomplish this. However, they are also concerned about providing suitable death benefits prior to the time when the savings reach a level that would provide for the needs for death benefits.

Thus far very little has been done in relating life insurance benefits directly to changes in the cost of living, but a number of approaches have been made to relating life insurance benefits to the market value of common stock. Most of these developments have been in Europe, as we will hear later.

To date, in the United States there has been no development of variable insurance related to common stock except for certain combinations of insurance and investment programs which Mr. Edwards is going to tell us about. If such equity variable insurance cannot promise to meet exactly the changes in the cost of living, the most that can be said is that it should have a tendency to vary with changes in the cost of living over reasonably long periods and, in general, should do a better job of providing purchasing-power dollars than the conventional fixed-dollar insurance.

In view of uncertainties, equity variable life insurance will often be sold as a device for protection in conjunction with conventional fixed-dollar life insurance. The theory is that if prices go up fixed-dollar benefits will be worthless in purchasing power but there probably will be more dollars from the variable life insurance policy. On the other hand, if prices go down, fixed dollars from the conventional policy will be worth more to compensate for the possibility of less dollars in the variable life insurance policy.

All variable life insurance can be classified into two types—cost of living variable life insurance and equity variable life insurance. The equity variable life insurance may be further classified into two basic types—that in which the total death benefit varies with investment experience and that in which only a portion of the death benefit, usually the policy reserve, varies with investment experience.

Let us look at those which have death benefits varying with the cost of living. From the viewpoint of meeting needs, it can be argued that the amount of insurance should vary with the cost of living. There is no insurance available in the United States which is guaranteed to do exactly that. At one time the Life Insurance Company of North America offered a living-dollar benefit plan designed to provide death benefits adjusted for changes in the cost of living. Basically, the living-dollar benefit plan is a combination of an ordinary life policy plus a supplemental fund. Withdrawals will be made from the supplemental fund each year to purchase one-year term insurance for an amount sufficient to make the total death benefit payable under the ordinary life policy, plus the one-year term insurance, equal to the original face amount increased by any percentage increase in the consumer price index. A specified part of each annual premium is paid through the supplemental fund. The insurance company does not guarantee that the amount in the supplemental fund will be sufficient to purchase this term insurance to keep up with the consumer price index. It does guarantee the issue of such additional insurance to the extent that the supplemental fund is available. It also guarantees the rate of interest credited to the supplemental fund, and it guarantees the premium rates to be charged for the term insurance.

If, for example, the consumer price index rises at 2 per cent per year, it is estimated that, for a policy issued at age thirty-five, the supplemental fund would be sufficient to keep up with the consumer price index for about thirty years. An initial death benefit of $10,000 would rise to about $18,000 over thirty years and then would drop to a level of about $12,000. If inflation were more than 2 per cent annually, the plan would not keep up with inflation long, but, if it were less than two per cent annually, it would last longer, perhaps indefinitely.

Any balance remaining in the supplemental fund increases the death benefit or surrender value.

The policy also has an option to allow the premium to be increased or decreased. The company has discontinued issuing this policy, and I understand that it was considered a little complicated to communicate to the average agent and average purchaser.

What about policies with the total death benefit varying with the investment experience? Under pure variable life insurance, the total death benefit would vary with the market value of the investments. All transactions relating to the contract of insurance would be stated in units. This would include the premiums, death benefits, cash values, and reserves. I am sure Mr. Maynard will tell us about such policies in Europe.

Further, most prospective purchasers would not want a contract with the premium an unknown quantity. This approach is impractical, but there is no way to provide such pure variable life insurance without variable premiums.

What about a portion of the death benefits varying with investment experience?

Most level premium insurance contracts, other than term insurance, may be thought of as a combination of increase in reserve and decrease in term insurance. A number of plans have dealt with the idea that reserves will be invested in common stocks and that the portion of the death benefit representing the reserve will fluctuate with the market value of the securities while the portion of the death benefit provided by the decreasing term insurance would be in fixed dollars. In the earlier years, of course, the reserve is small, and, therefore, the fluctuation in the total death benefits is small. In later years, particularly under endowment policies, the reserve approaches the face amount, so there would be considerably more fluctuation.

As for keeping up with the cost of living, these plans have a very limited effectiveness in the early years. In the United States, this program has been accomplished only by a combination of decreasing term insurance with systematic investment programs, either using mutual funds or other investment programs. Thus the reserve element and the decreasing term insurance are entirely separate, and the combination of the two may be thought of as variable life insurance only in the broad sense of the word. It would be theoretically possible to provide such a program under a single policy if the legal obstacles could be overcome.

What are the problems and future prospects?

The little progress that variable life insurance has made in the United States can be accounted for partly by the problems it faces. At this stage we can do no more than speculate about the regulatory and the legal problems that are involved in writing the various forms of variable life insurance. Theoretically, variable life insurance could be written now in some states without further legislation. It remains to be seen whether the insurance commissioners of these states will approve, and the companies of these states will want to proceed to write, variable life insurance without asking for specific legislation for that purpose.

Taxation of the proceeds of variable life insurance is uncertain and should be carefully considered by any company issuing such contracts and by persons purchasing them.

There is also a substantial legal problem of whether variable life insurance is a security or insurance or both. Certainly dual regulation would be extremely complicated in the life insurance field. The controversy over jurisdiction, which has been raging for some years in the variable annuity field, will probably be enlarged and even more bitterly contested in the variable life insurance field. This possibility may be the chief deterrent to the spread of variable life insurance in this country.

I think the insurance industry may take a new approach, make a new effort to say that insurance is exempt from SEC regulation. The insurance industry has had considerable internal controversy over variable annuities, and it is safe to say that variable life insurance will have a similar controversy. I assume that a segment of the insurance world will not want to see variable life insurance policies and fixed-dollar life insurance policies sold by the same agent. As variable life insurance may be offered initially under a balanced plan, which requires the purchase of a certain amount of fixed-dollar life insurance, the role of the life insurance salesman will almost surely be a center of controversy.

Insurance companies may feel that selling variable life insurance would indicate a lack of faith in the economy and would shy away from it for that reason. Certainly some in the life insurance industry will argue strongly that life insurance has been built upon its guarantees and variable life insurance would undermine the confidence of the public in the guarantees of life insurance. The arguments will be similar to those which have opposed variable annuities, but perhaps more forceful because annuities have a greater investment element than life insurance.

Proponents of variable life insurance will counter by saying that fixed-dollar life insurance does not provide the kind of guarantees that are needed—it guarantees the number of dollars that will be paid upon death but makes no guarantee of what this will be able to purchase for the widow and orphans of the insured.

Any appraisal of the future of variable life insurance in this country cannot be divorced from these factors of controversy. Certainly, the nature and extent of the controversy will affect the development. The loudest voices in the controversy may be expected to come from insurance companies having a large vested interest in fixed-dollar insurance. The public has had no protagonists, and yet the interest of the public ought to be paramount.

In spite of the difficulties, it seems likely that variable life insurance eventually will be written in large volume in this country. Certainly there is a need for it, and the techniques are well known. Under these circumstances, we may reasonably assume that the legal, regulatory, and political problems will eventually be solved.

MR. CLINT E. EDWARDS: In the discussion this morning in relation to holding companies, the idea of one-stop selling was mentioned. It was noted that one-stop selling has not really panned out too well. This concept has applied generally to the idea of combining life sales with general insurance.

There is a new trend developing in our country—that of combining the sales of equity products with life insurance. This combination is perhaps a more logical marriage of products than general insurance and life insurance.

This trend has been delayed by two factors. First, and no doubt most important, has been the reluctance of the insurance industry to risk its reputation by sponsoring a product in which it attempts but cannot guarantee to offer new kinds of financial protection—that is, protection against inflation.

Second, there have been legal problems. For example, most state statutes prohibit rebates or any special inducements in connection with life insurance sales. Some states have questioned whether a package plan violates this law.

Also some states have taken the position that the sale of life insurance and mutual funds represents a package sale and, as such, is subject to security licensing and regulation. Fortunately, at least in most states, these legal problems have been overcome and are no longer significant.

In my remarks, I will briefly describe the combination products which are being marketed in the United States at the present time, at least those of which I am aware. These products are not as elaborate or as complicated or as exciting as these we have just heard about and those that we are apt to hear about, which are being marketed in Canada and Europe. However, they do represent a significant difference from the products our salesmen had available just a few short years ago.

I have classified combination packages which are being sold in the United States into various basic categories and will briefly touch on each one of them.

Package one is ordinary life or endowment plans with mutual funds. This combination, in some package plans, is available only in specific predetermined proportions of each product. For other packages, the relative amounts can be selected by the buyer. This packaging, using ordinary life with a mutual fund, is frequently used for pension plans similar to the old stand-by method of using ordinary life with auxiliary side funds. The policy contains a guaranteed annuity purchase up to twenty or thirty dollars per thousand. In some cases, the buyer makes his payment with one check, which covers both products. In others, he makes separate checks. Sometimes the sale is made by one salesman who, by the way, must be licensed both as an insurance salesman and security salesman, or it may be made by two salesmen operating under the same sales management. The insurance in the mutual fund may be under the control of the same manager or under completely separate management.

Package two provides for term insurance with mutual funds. Packages of both level term and decreasing term with mutual funds are marketed along the lines indicated in package one. Decreasing term insurance is sometimes sold in connection with contractual mutual funds. In this case it is called "completion" insurance, which is an expression coined in investment circles. Completion insurance is group creditor insurance and may provide disability insurance, decreasing term insurance, or both. For disability insurance, the contract payments are waived in the case of disability; for the term insurance, the balance of the unpaid contracted payments is paid in a lump sum at death. Most of these plans have a $30,000 maximum insurance amount and require a medical examination when the insurance amount exceeds $18,000.

Some states have objected to the use of group creditor insurance, since there is a question of whether there is indebtedness under a contractual plan. This problem can be solved by providing that the balance of the payments is due at the death of the investor.

Special package three involves special policies in combination with mutual funds. By special policies I mean policies providing such features as return of premium benefit and coupons or guaranteed cash benefits, in other nomenclature. These benefits are frequently used in sales presentations, as we all know. Such presentations have been given more effectiveness by providing that the coupons, as they mature, may be put into a mutual fund, subject, of course, to the customary charges. One plan with coupons provides a guaranteed annuity purchase rate for the amount of the accumulation of the coupons in the separate accounts.

In certain states, where investment laws are quite broad, coupon policies have been worded in such a way that coupons are placed in a special deposit fund. Some companies have invested these funds in common stocks. I understand that the SEC is questioning whether these funds in effect are a separate investment company, subject to regulation as such.

There are some obvious commission advantages in this package over the previous packages mentioned, since all the dollars first make their way through the insurance product before finding their way to the mutual funds.

Package four is a three-way package. Typically, one-third of the buyer's dollar goes to ordinary life, one-third to mutual funds, and one-third to a savings account.

A co-operating bank receives the payment and appropriately disburses the money. The philosophy of this package is that the bank account money is immediately available for emergencies or opportunities and also, after it is built up, can be used for additional mutual funds or insurance purchases.

Package five has to do with equity funding. This package works in the following manner. The buyer's initial payment goes into a mutual fund. The buyer then makes a loan. The loan is secured by using the fund shares as collateral to purchase life insurance. All future buyer's payments purchase mutual funds. Additional loans are made for the purpose of paying future premiums.

The record-keeping is done by the seller, for which there is a charge. The seller also receives sales commissions from the mutual funds and the insurance company.

The idea of the package is that the yield or the appreciation from the mutual funds will offset the principal and interest on the loan, as well as the related charge.

It is my understanding that this package was conceived by mutual fund people operating in states where the front-end load or contractual plans were not allowed, for the purpose of bolstering commissions. I might also add that there are critics as well as advocates of this package. The SEC has, for example, ruled that this package is a security which must be registered; this ruling has sharply curtailed the marketing of the package.

Package six is almost the reverse of equity funding. The life insurance is purchased first. The maximum loan is obtained from the policy's cash value each year to purchase mutual funds. The idea, of course, is that the mutual fund's appreciation should exceed the increase in the cash values.

I imagine there are critics as well as advocates of this scheme. Maybe some of the critics are in this room.

Package seven involves some mutual funds which provide that under certain circumstances the fund shares may be redeemed and the proceeds used to purchase an immediate annuity from an affiliated insurance company at a guaranteed rate. The annuity is fixed rather than variable.

This package is different from the others in that there is no death benefit.

Previous packages have dealt with mutual funds. Several plans have been introduced combining insurance benefits with variable annuities. This has been accomplished by the variable annuity contract serving as the basic plan and insurance benefits as the riders. These riders often have included term insurance, waiver of premium, and disability income.

Variable annuity contracts have also been offered as a package with life insurance policies.

MR. JOHN C. MAYNARD: This discussion is an outline of present-day features of equity-linked contracts in Holland, the United Kingdom, and Canada.

Holland

Developments in Holland have shown that a different environment can lead to unusual insurance policies. An insurance contract under which both premiums and benefits are expressed in units was introduced by the life companies in Holland in the later part of 1965. The value of the units depends on a monthly valuation of a fund of equity investments. The premiums vary continuously with unit values, and the amount of a benefit payment depends on the unit value at time of payment. Policyholders participate fully in investment gains and losses. This simple method of converting payments to and from the insurance company makes it possible to offer all types of insurance and annuities in this form. This plan was reported on by Dr. de Hullu at the annual meeting of the Society in 1966.

The United Kingdom

The environment in the United Kingdom has also encouraged the development of contracts with benefits varying directly with investment performance. One reason is the relative freedom from regulation in that country. Another reason is the effect of an income tax system which favors life insurance by permitting deductions from taxable income of a large proportion of life insurance premiums. The proportion is as high as 40 per cent, subject to certain limitations.

The tax incentive has been a strong one which has led to carefully designed combinations of unit trust funds and decreasing term insurance. By this means the payments to the unit trust have qualified for the life insurance tax credit. This has produced the attractive result that a person could obtain both a unit trust investment and insurance at lower net cost than he could obtain the unit trust component alone. There are many variations of these arrangements, but most of them may be thought of as endowment policies which fall into two common types:

1. A definite percentage of each premium is deducted and applied toward expenses and the cost of decreasing term insurance. The balance of the premium is applied toward units in the unit trust fund. The value of the units and investment income arising from them are paid to the policyholder when a benefit is due.
2. It is assumed that the company purchases units each year with a portion of the sum assured, so that by the end of the endowment period the full sum assured has been applied. The death benefit is the value of the units purchased to date plus the balance of sum assured.

A characteristic of all of these policies is that benefit payments on death or maturity depend on the market value of units purchased to date. Some companies have also guaranteed minimum benefit payments, and, in order to provide for this, one would think that the policy would be restricted in some way or that some charge would be made and held as a reserve against the risk involved.

At the fall meeting of the Society in 1966 a review of equity-linked contracts in the United Kingdom was presented by Mr. Graham Holland (*TSA*, XVIII, D671). At that time some forty equity-linked schemes were available. These schemes were being offered only by the smaller companies, and the volume of business being done was small. Since that time the outlook of the larger companies has changed. A few have entered the field, one of the largest has announced its intention to do so, and others are known to be considering the matter actively.

Because of the growing interest in equity-linked policies in the United Kingdom, the Canada Life decided to introduce two policies of this kind there in November, 1967. The aim was to design policies which were similar in many ways to regular policies for ease of understanding and administration but with benefits varying directly with the market values of a new fund invested mainly in equities. The policies are endowments with single and monthly premiums. Death benefits and cash values are similar to those of regular policies but with an adjustment equal to the change in the market values of units of the fund purchased by gross premiums. That part of each purchase which is the difference between gross and net premium is an investment of surplus funds and leads to a reduction in policy dividends for the purpose of reimbursing regular policyholders for the lower investment earnings which are likely to accrue on this surplus while it is invested in the new fund. The new business on these policies in the first five months has been much greater than expected, the new premium income from the monthly premium plan being at half the rate for new premium income from all regular insurance policies in the previous year. In the same period the new premium income from the single-premium policy has been at 150 per cent of this same rate, while the new premium income from regular insurance policies has dropped by about 15 per cent.

These policies have introduced problems in the completion of the annual report to the government of Canada. This report does provide for segregated funds of equity assets, but the arrangement of the report has not allowed for insurance benefits or for the accumulation of surplus in the fund. The growth of this surplus item at a time of sterling devaluation has been another problem. Also, it has been necessary to determine a method of assessing charges to meet accruing capital gains tax, and this has been done by defining charges partly against unit values and partly against benefits disbursed. The dividend formula for these policies has had to be modified so as to reflect the investment earnings of the new fund and the loss of investment earnings arising from the investment of surplus. All these problems are still being studied.

Canada

The environment in Canada is conducive to equity contracts for several reasons. In the last few years there has been a higher rate of inflation there than there has been in the United States along with a tendency to instability in the value of the Canadian dollar. Then, on January 1, 1966, the indexing of benefits was introduced for both components of the federal government pension plan: the Canada Pension Plan, which is the contributory wage-related component, and Old Age Security, which is the flat-rate component. Under both plans, pensions were increased on the first of January, 1968, by the maximum $2\frac{1}{2}$ per cent permitted under the automatic formula related to cost-of-living. At the same time the maximum salary under the Canada Pension Plan for benefits and contributions was increased automatically from \$5,000 to \$5,100. Unfortunately, recognition of inflation by the government probably increases its severity, and in this situation people are likely to place their savings in equity investments.

Differing from companies in the United States, the life companies in Canada have shown little interest in mutual funds for reasons of licensing and legal power. In Canada the licensing of agents to sell life insurance is a provincial responsibility, and until now the provinces have not given licenses to sell both life insurance and mutual funds. There has been increasing pressure to permit dual licensing, but so far the Life Underwriters Association has stood firmly in opposition. Furthermore, under present laws it is quite difficult for life companies to associate themselves with mutual funds. The companies cannot issue investment contracts, so they cannot offer mutual funds directly. A life company under federal law is prohibited from owning more than 30 per cent of the common shares of any corporation, so it cannot own the controlling interest in a mutual fund. It is possible for a holding company to control both a life company and a mutual fund, but this is not a solution for most companies, including the large mutuals. It is quite possible that federal law might be changed to permit the life companies to offer mutual funds. It is also quite possible, even probable, that the opposition to dual licensing will dissolve. If one of these obstructions is removed, the other is likely to follow, and life companies would then be certain to show a new interest in mutual funds.

It is expected that regulations which affect the design and issue of individual variable annuity and insurance contracts in Canada will be laid down this year. The authority in this matter rests with the provinces. In 1967 a variable insurance contract was introduced in Alberta. As a result of this, the Alberta Insurance Act was amended, and the superintendent of insurance of Alberta issued a set of regulations to all companies licensed in the province. The regulations required that premiums be broken down into components of mortality, expense, and savings; this requirement tends to restrict the design of variable insurances. The problem was referred to a committee set up by the Canadian Life Insurance Association. The Association naturally felt that it would be unfortunate if each province were to establish its own set of regulations, and the government of Alberta has agreed for the time to apply its regulations only to companies incorporated in Alberta. A subcommittee of the Canadian Life Insurance Association has been studying the problem in the past year, and a recommendation has just been made to a joint meeting of the superintendents. The recommendation deals with both legislation and regulations and is a modification of the Alberta procedures.

Legislation.—It is recommended that an insurer who proposes to offer policies under which the liabilities vary in amount with the market value of a specified group of assets should, at least thirty days before any offer, file with the superintendent the policy form and other relevant documents, including advertising material. If the superintendent is not satisfied, he could take steps to prohibit the use of the policies, but he would not do so without arranging for a hearing with the insurer.

Regulations.—It is recommended that the policy documents contain safeguarding statements concerning the nature and amounts of the variable benefits and the frequency and method of valuing the investment fund. Policyholders should receive a statement of benefits at least once a year. The recommendations are based on the principle that there should be sufficient disclosure to permit a clear understanding of the policy and a judgment as to its fairness. However, great care has been taken to try to avoid restrictions which would inhibit development of new forms of contract, such as the variable endowment contracts which have been prepared in the United Kingdom. The superintendents are sympathetic to these points of view and have set up their own committee to study them further. The present outlook is that no legislation will be enacted but that a uniform set of regulations will be put into force before the end of this year.

It is possible that legislation affecting variable contracts in Canada may arise from another quarter. As is the case in the United States, the security commissioners have become concerned with the charges levied against the purchasers of mutual funds. Last year the federal government, with the co-operation of the provincial governments, set up what was called the "Canadian Committee on Mutual Funds and Investment Contracts." The purpose of the committee was to conduct a study of mutual funds, including those administered by or sold through trust companies, banks, and other financial institutions; this was to include a study of investment contracts and variable annuity contracts sold by life insurance companies. It was stated that such a study would provide a basis upon which a decision might be made as to whether additional legislation is required for the adequate protection of members of the public investing in these classes of security. The committee consisted mainly of representatives of the various provincial security commissions together with representatives from the federal government. Up to the present time this committee has been concerned only with gathering information. It has asked various bodies for data in connection with the subject matter. The Canadian Life Insurance Association, among others, was asked to provide information with respect to variable annuity contracts and other long-term investment arrangements regarded as competitive with mutual funds and to the adequacy of regulation thereof. The request was referred to the same committee which has been dealing with insurance legislation, and the information requested by the government committee has been supplied in the form of a brief. Care has been taken in the brief to recommend that control over variable contracts should be confined to one authority and to state that the authority of insurance law has served well the public interest for many years. The government committee is expected to publish its report by February, 1969.

Taxation is important to this whole area. The life insurance companies do not now pay corporation tax except on shareholder earnings. Since the publication of the Carter Report in 1967, the possibility of a major change in this position has been a real one. The resulting uncertainty has undoubtedly acted as a brake on the development of equity contracts.

It should be mentioned that, although uncertainties have existed concerning taxation and supervision, it has been possible since 1961 to issue some forms of equity-linked contracts. In that year the insurance acts were amended to permit companies to establish segregated funds under which there would be no restrictions with regard to the maximum investment in equities, provided that the liabilities of the policies varied with the market value of the fund. Shortly after the passage of this legislation, many companies introduced group annuity plans involving such segregated funds. In the years which followed, the growth in such funds was not particularly great, but there has been a gradual and continual enlargement of the types of such contracts offered. At the present time most of the major Canadian companies offer something in the form of equity-linked group annuities. To meet the requirements of the insurance act, all such contracts contain an element of life contingency through the provision of at least an option of a guaranteed annuity at retirement. Some companies restrict the variable funds to contributions resulting from employer contributions. Other companies will permit both employer and employee contributions to go into the variable fund. Some companies require a guarantee of the employee's benefit at retirement, in which case the employer, of course, assumes the investment risk. In other cases, the investment results affect the benefits paid at retirement or earlier. It appears that very few of the companies offer a variable pay-out, but some are undoubtedly considering such a step. Generally speaking, there has been quite extensive development of equity-linked contracts in the group annuity area.

For several years after the change in legislation in 1961 there was little interest in individual equity-linked insurance policies, but there has been a decided change in this during the past two years. A variety of insurance and of annuity contracts is being offered, although apparently only one of the larger companies has introduced a plan with life insurance. Many of the policies have been influenced by the development in the United Kingdom. Undoubtedly many companies are studying the situation, and more variations may be expected when some of the uncertainties are resolved. The following are examples of individual plans now available in Canada:

1. An endowment policy with fixed premium but with death benefit, maturity value, and cash surrender values related to market value of equity units and with a minimum guarantee applicable to some of the benefits.
2. A combination of term insurance to age 65 and investment of a stipulated proportion of the annual premium in equity units. (See discussion by Mr. Graham Holland, *TSA*, XVIII, D678.)
3. A deferred annuity policy with net premiums invested in equity units until retirement age. The amount and date of payment of gross premium are optional, subject to a maximum and minimum within a calendar year. The proportion of gross premium deductible for expenses is subject to a stipulated maximum.
4. A participating ordinary life with provision for investing one-half of basic policy reserves in an equity fund. To the extent that these funds earn more or less than normal investments, a special positive or negative dividend is created.
5. A life paid-up-at-65 policy under which every five years it is possible to elect that 25, 50, or 75 per cent of the premiums shall be invested in an equity

fund. Profits on these investments are applied each year to increase the sum assured.

6. A provision under which dividends on a regular policy can be left on deposit with the company to be invested in equity units.

7. A contract under which a mutual fund provides a variable immediate annuity by reinsuring the mortality risk with an insurance company.

Quite clearly the development of equity-linked contracts in Canada is in a very formative stage. Decisions will be made in the next two years which will have an important bearing on the business of life insurance for many years.

MR. CHARLES T. P. GALLOWAY: The "National Equity Life Insurance Policy" was designed by H. R. Lawson for the National Life Assurance Company of Canada. The details of the plan were completed in January, 1966, but it was not made available to the field force of the National Life until February, 1967. Since that time it has accounted for approximately 5 per cent of our new Canadian individual business by numbers of policies and 6 per cent by amounts.

The objective of the designer had two aspects. One was to produce a policy for which a portion of the assets covering the policy reserve would be invested in a separate fund, and the benefits arising from the policy would vary, depending on the performance of the separate fund, so as to provide a hedge against inflation. The other was to maintain the advantages of a level stipulated premium and a policy which fitted the regular procedures of the insurance company with respect to premium payments, commission payments, and, as much as possible, other administrative procedures.

The policy is a regular participating straight-life policy with annual dividends commencing at the end of the second policy year used to purchase paid-up additions to the sum insured. The same rates of premium and commission and nonforfeiture tables are employed as those for the regular series of participating straight-life policies sold by the company, and the same rules on addition of benefits and similar matters apply. During the first policy year, the policy is handled in the same fashion as is any other policy on the same plan.

At the end of the second policy year, a sum of money is transferred to the equity fund of the company. (In our present contract, this is stipulated to be 50 per cent of the medial policy reserve for the ensuing policy year, but this is not essential for the theory.)

At the end of the second policy year, a calculation is performed to compare the value of the assets in the equity fund with the initial amount transferred increased by interest at a rate one-fourth of 1 per cent higher than the company's net earned interest rate for the preceding calendar year. This amount is intended to provide for the interest lost by the general funds of the company because of the absence of the amount invested in the equity fund and for the administrative expenses of the equity fund. The difference between these two amounts is added to the regular dividend for the second policy year before the policyholder's paid-up addition is calculated. If the appreciation in the equity fund units has been insufficient to cover the interest calculation, a negative adjustment arises and the dividend is reduced thereby. If this negative amount exceeds the dividend, a negative paid-up addition is purchased and carried in the policyholder's account.

At the same time, an amount is transferred from the general funds to the equity fund, so that the third policy year starts with an amount in the equity fund equal to the medial policy reserve for that year and accounting entries are performed so as to reflect the expense charge, the amount used to purchase the paid-up addition, and the net transfer to the equity fund in appropriate accounts of the general funds. The liability for the paid-up additions is carried in the general fund or, where negative, deducted from the liability for that portion of the policy being carried in the general fund. The policy reserve for the basic policy is split equally between the general fund and the separate fund. If the policy should terminate for any reason between policy anniversaries, a special interim dividend is calculated and added to the benefits otherwise payable.

Although we include in the policy a table of nonforfeiture values, the factors of which are guaranteed, it is theoretically possible for a large negative paid-up addition account to be built up which would cancel out a large part of the cash value of the basic policy carried in the general account; we therefore removed the word "guaranteed" from the cash-value table. Presumably, the lack of guaranteed values would make our plan unacceptable for sale in the United States. We felt it was impractical for us to administer policy loans under the circumstances, so that the normal policy loan clause and automatic premium loan clause were removed. In the event of nonpayment of premium, the policy automatically becomes a reduced paid-up policy, and the equity participation feature terminates at that time. The policyholder has the right to convert his policy to a regular participating straight life at any time, subject to his paid-up addition account and interim dividend being taken into account for the new policy, at which time the regular policy loan provisions would be written into the contract.

Tests have indicated that the beneficiary would rarely receive less than the initial face amount of the policy, and then only if depreciation in the stock market occurred during the early years of the policy to such an extent that negative paid-up addition accounts arose. Over the long haul, the sum insured and cash values of the policy in test calculations performed increased somewhat more rapidly than would have been required to cover the rate of inflation occurring during that time.

MR. EDWIN P. METZNER: Mr. Grubbs, when you were discussing possible variable life policies, one that you mentioned was fixed decreasing term and variable reserve. You said that this could not be done now or could not be done adequately with the mutual fund and decreasing term policy. However, could that not be done with the variable annuity policy on decreasing term riders?

MR. GRUBBS: If the question is whether one can now issue a variable annuity policy with a decreasing term rider, the answer is clearly "Yes."

MR. METZNER: My question is, Can you not duplicate the variable reserve fixed decreasing term?

MR. GRUBBS: I said that a number of contracts of life insurance are currently being issued which do provide this variable increasing reserve and decreasing term insurance—that there would be regulatory problems that nobody really knows the answer to.

One topic we might spend some time discussing was something brought up in Mr. Howell's remarks. This had to do with taxation of variable annuities.

At the Lincoln we have now started to offer nonqualified individuals variable annuities. We have come to the conclusion that the nonqualified variable annuity is at a definite disadvantage to mutual funds in virtually all respects.

On the nonqualified variable annuities there is a tax on the realized capital gains. Our accountants tell us we are required to set up a liability equal to 25 per cent of the unrealized gains. This means we have to put aside 25 per cent of all capital gains into a reserve for taxes to be paid at a later date.

MR. HOWELL: The model variable annuity regulation or bill that is being circulated now in the industry contains provisions which effectively wall off the variable annuity that goes to the reserve itself. If you read the regulation carefully, it says that there is a certain kind of walling-off of the surplus that arises out of those accounts.

In the wording of the bill, the lawyers are conceiving of the surplus of the insurance companies as being divisible; the company may eventually have walled-off surpluses, and in some instances it can only be in one direction—it may be only to protect the variable annuity account.

This is a very serious matter and goes right to the very heart of a lot of the things that all of us have said for generations, namely, that a company has one surplus and it is essentially indivisible, although it may be analyzed for experience purposes and we may find ourselves with some anomalies on our hands.

MR. LEWIS P. ROTH: I was wondering if I could return for a moment to your question on the 25 per cent capital gains tax for nonqualified people.

Do you know of any rulings, laws, or promulgations that your accountant points to that require a liability for this reserve to be set up? It is obvious, of course, that all of the unrealized gains in a growing company are not going to be realized, and it is conceivable that you could set up a liability less than 25 per cent for this reserve. Has this been looked into?

CHAIRMAN IAN M. ROLLAND: A regulation put out by the SEC indicates that the only way to achieve equity among all policyholders is to set up the full reserve of 25 per cent of the unrealized capital gains. It is clear-cut according to the regulations, and our attorneys have come to the same conclusion. Of course, our sales people did not come to their conclusion quite as easily. However, I think we have all accepted the fact that this is going to be the case.

The industry now is considering asking for a change in the taxation of nonqualified variable annuities. The thought is that we should have mutual fund treatment during the accumulation period, at least, so that we can pass through to our policyholders the realized capital gains. This then would put the realized capital gains into their tax return and eliminate the need for the liability we set up.

MR. ROTH: Are you saying that this would disallow the pay-as-you-go concept of paying the tax on the realized capital gains and would reduce the unit value at that point rather than holding the reserve at all?

CHAIRMAN ROLLAND: This is the thought. We would still have the tax-free status for dividend income, but we pass through the realized capital gains; by making the tax the responsibility of the policyholder, we as a company would not have to set up the liability.

Our study shows that, unless you plan to organize your variable annuity based upon no capital gain, you are probably going to be at a disadvantage with mutual funds during the accumulation period.

MR. GRUBBS: In regard to the amount of reserve, one question is the legal question, and the other is the practical question of how much reserve will ultimately be needed. If someone can tell me what the taxes are going to be many years in the future when the gains are actually realized, then I think I might be able to answer that question.

Similarly, in the comparison of mutual funds versus variable annuities, all the comparisons I have seen are based upon the assumption that the present tax laws and present tax rates will still be in effect ten years from now or fifty years from now, when people retire and receive their benefits. I think we should bear this in mind in connection with the use of comparisons.

CHAIRMAN ROLLAND: I was wondering if any company here might wish to comment on any success or lack of success they have had in connection with combination sales of equities with life insurance. There have been questions raised about pressures to relax underwriting standards in situations involving combination sales.

We have done some packaging of variable annuities with life insurance, and thus far there has not been a problem about relaxing underwriting. I think the main reason for that is that, even though our agents got quite excited about the possibility of packaging life insurance with variable annuities, because of the increased commissions, they are not doing very much of it. Only about 10 per cent of our policies have any life insurance connected with them. Therefore, we have seen no pressures to relax underwriting standards on life insurance sold with variable annuities.

MR. MAYNARD: One company, several years ago, wished to develop a close association with a mutual fund, and, for the reasons that we discussed earlier, could not do so directly. I believe it involved some kind of holding company operation which allowed them to be hinged together. Through this association it was possible for the mutual fund to make payments to the life company and insure mortality, and, in turn, if the annuity went on too long, the insurance company could make payments in the reverse direction, therefore relieving the mutual fund of the mortality risk. I am afraid I do not have the actual details of the back-and-forth transactions.

MR. GRUBBS: One approach is that used by the National Life of Toronto, in which the reserve essentially was invested in the mutual fund and each year withdrawal was made from the reserve to purchase a one-year temporary fixed annuity from the life insurance company. The amount of the withdrawal was stated as a percentage of the mutual fund, so that, if the market value went up the next year, the premium and the annuity went up; similarly, if the market value dropped, there would be a drop in the premium and the amount of annuity. This is based on exactly the same annuity principle in which, for every year a policyholder lives, there is a loss and in the year in which the policyholder dies, the reserve is released and there is a gain. Thus, in each year in which the policyholder lives, the premium which is paid to the insurance company is less than the annuity payments.

For example, there might be a premium of $10 to pay out a $12 annuity, but, in the year of death, the entire reserve is released and paid to the insurance company.

MR. HOWELL: I have felt from the time when we first started the variable annuities that the cost-of-living plan will usually be cheaper if the expected appreciation is realized on the common stock performance. It could be much more expensive if it is not. Although we have been willing to offer a cost-of-living plan for five years, and we have worked out two or three of them, every time we get down to the point of sale, the customer does not want to purchase it. I think the reason is that he is really afraid he may be caught by the cost of living's getting out of hand; even if some kind of stop provision were put on it, he somehow still ends up not quite wanting to take that course of action. I think this involves a psychological fear more than anything else.

MR. GRUBBS: Cost-of-living annuities have been provided for some years on the trustee basis. Here the insurance company does not guarantee the cost of living. This is a cost which is passed along directly to the policyholder and the employer.